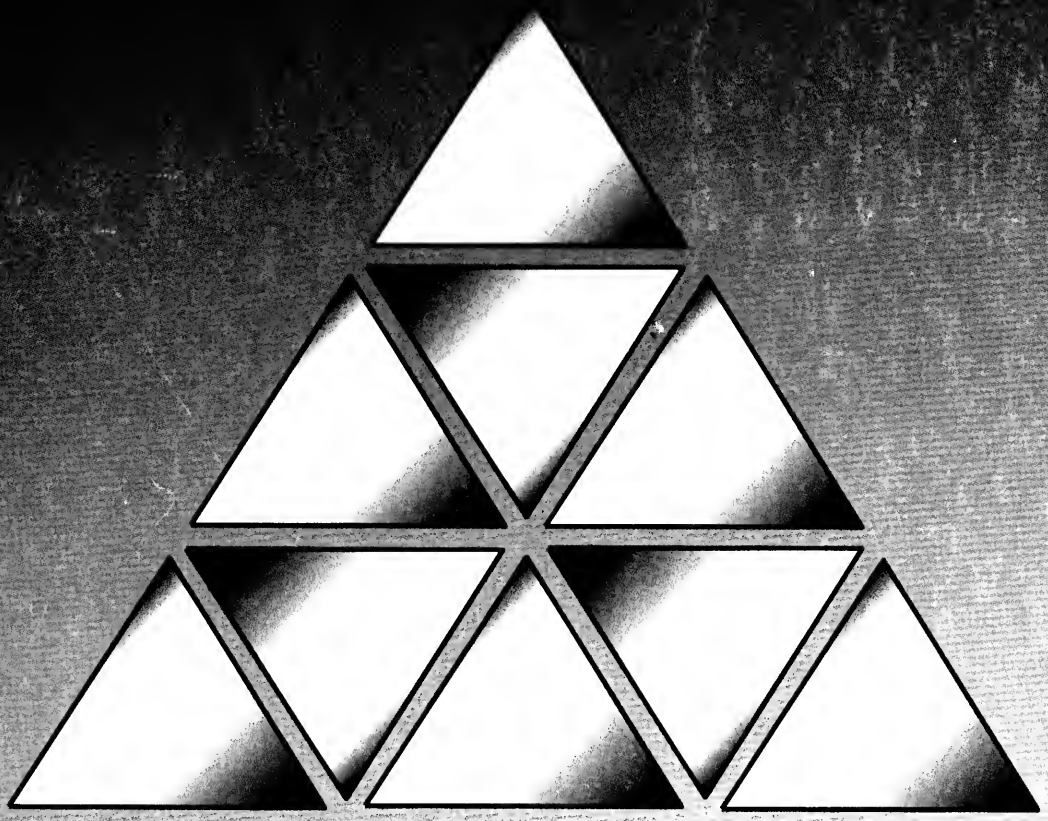
STATE OF MONTANA

1996-97 Information Technology Plan



ISD

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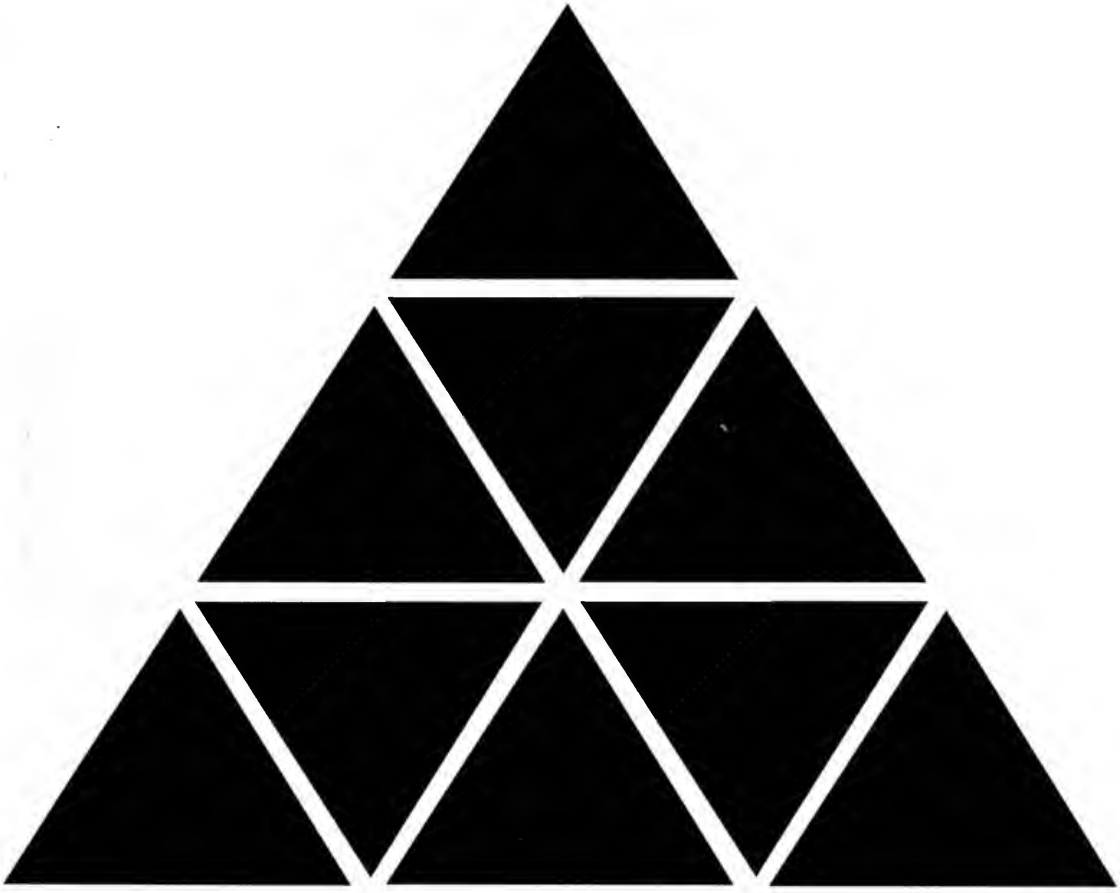

ISD
Information Services Division

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Additional copies of the *1996-97 InformationTechnology Plan* are available upon request by contacting Wendy Wheeler at ISD (406/444-2856).

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Information Services Division
Department of Administration
State of Montana
P.O. Box 200113
Mitchell Building Room 222
Helena, MT 59620-0113

Phone: 406/444-2700
Fax: 406/444-2701

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FOREWORD

The State of Montana's *1996-97 Information Technology Plan* provides an overview of the state's information technology organization, environment, initiatives, and plans.

This biennial plan, written and published by the Information Services Division (ISD) of the Department of Administration, serves as a tool for managing (not controlling) information technology--a valuable state asset and resource which is changing the way Montanans live, conduct business, and communicate.

Therefore, ISD encourages Montana's legislators and citizenry to utilize this *1996-97 Information Technology Plan* to:

- learn about the state's information technology enterprise
- learn how the state is currently utilizing information technology to bring about faster and more efficient public services
- learn about agency plans and ISD initiatives for future development or expansion of information systems
- learn about state initiatives for expanding the statewide network in order to: bring about the delivery of agency services and educational programs to all parts of the state, give the public access to national and international bulletin boards and databases, promote economic development, and prepare for federal government mandates which require up-to-date networking and data transfer capabilities.

For 1996-97 Information Technology Plan Highlights, read:

If you have comments or questions about the *1996-97 Information Technology Plan*, please fill out the evaluation form found on page 211. Your response will be appreciated, and will be forwarded to the Information Technology Advisory Council.

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The *1996-97 Information Technology Plan* could not have been compiled without the help of the following participants. ISD thanks you for your cooperation and participation.

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..... Connie L. Griffith
..... Susan T. Campbell
..... Mark Cress
..... Martha Johansen
..... Ken Kops
..... Roxanne Minnehan
..... Larry Nelson
..... Jere-Ann Nelson
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Department of Livestock ..... Carol Robocker-Andersen
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EXECUTIVE SUMMARY

Introduction

The 1996-97 Information Technology Plan defines the State of Montana's biennial goals and plans for utilizing computer hardware, software, telecommunications, and networks throughout the state--a utilization which will bring about an accessible, accountable, and efficient state government. In addition, this plan defines the state's current information technology organization, environment, vision, strategies, and preparation for the 21st Century.

This Information Technology Plan is a valuable tool for information technology management and strategic planning as it defines the direction the state will take for:

- maintaining and expanding a state information technology infrastructure and network--for maximizing the investment the state has in information technology resources; for streamlining current government processes; and for promoting economic development.

- bringing about long-range information technology benefits to the people of Montana--such as, statewide and remote access to agency and educational services and information; and increased use of video conferencing for training, educational purposes, and interactive meetings.

- supporting the management of state information technology resources from an enterprise perspective--agencies, departments, educational entities, city/county governments, and advisory groups working together to bring about more efficient government.

- promoting research and implementation of emerging technologies--which demonstrate long-range, cost-saving potential.

Incorporated throughout this document is the *state's commitment to planning from an enterprise perspective*. This means that the Enterprise organization (Information Technology Advisory Groups; Information Services Division, Department of Administration; and Agency Information Technology Departments) works together in a distributed environment and develops and implements strategies and standards which respond to the information technology needs of the state.

Enterprise Vision

Major components of the Enterprise's vision or future direction are defined below:

The expansion of SummitNet, our statewide network. Currently SummitNet links 12 cities in 12 counties. The Enterprise vision is to expand this network--

linking 64 cities in all of Montana's 56 counties, including the entire university system and all seven of its Native American Tribal Colleges. This expansion will promote and accommodate the delivery of state services and educational opportunities to citizens in remote areas of Montana. This expansion will also allow the state to invest in technology which will allow the citizens to take advantage of (1) the National Information Infrastructure (federal and state networks, Internet, commercial networks, health care networks, etc.) and (2) interactive conferences with legislators and state officials.

The design of a consolidated public safety radio network. Pending Federal Communications Commission rules and regulations portend dramatic changes in the radio landscape. Implementation of these changes could cost the State and its subdivisions as much as $25,000,000. A consultant will be hired to investigate the existing state and local public safety radio systems and to provide a technical system design for a shared radio network.

The expansion of the multi-point, video conferencing network. This network gives more citizens access to conferences, meetings, training sessions, and educational classes.

The development of directions for enterprise database development and local area networking. An Oracle site license was acquired and a Novell master license agreement was finalized.

The rewiring of the capital complex buildings. This rewiring project will replace wiring in the capital complex buildings and will support voice, video, and data transmissions.

Enterprise Strategy

In 1994 the Information Technology Advisory Council (ITAC) published strategies and recommendations to be implemented by the Enterprise. These recommendations pertain to the following topics: access and privacy; training; funding; and coordination of services and resources (as related to telecommunications, data processing, and governance). The Enterprise is in the process of implementing these recommendations, which will strengthen the current Enterprise organization and environment and will refine the Enterprise's vision. Recommendations contained in this Strategic Plan are found in Appendix C.

Enterprise Information Technology Plans

Level 2 of this Information Technology Plan defines the Enterprise's '96-'97 plans, and lists accomplishments during the last biennium.

An analysis of future utilization of information technology by agencies reveals that 30% of all state agencies will be involved in database development; 26% in imaging; 29% in Internet access; 19% in Electronic Data Interchange and Transfer; 15% in GIS (Geographic Information Systems); and 15% in Video Applications.

For a consolidated listing of the Enterprise's plans, refer to Level 3. This listing will be utilized by the Enterprise for strategic planning and for studying information technology utilization trends; networking requirements; training needs; hardware/software requirements; and database, application, and information sharing needs.

Enterprise Utilizing Information Technology

Major agency applications have been developed to benefit the citizens of Montana, and these applications illustrate the benefits derived from efficient information technology planning. Several of these applications are described below.

Department of Commerce: The Department of Commerce's Superhost Program provides tourism information to residents and out-of-state visitors via KIOSKS located in Visitor Information Centers in Culbertson, Dillon, Hardin and West Yellowstone.

Department of Family Services: The Department of Family Services has developed the Child and Adult Protective Services application (CAPS) which allows the caseworker to spend more time delivering services to clients and families because CAPS is an automated case management system.

Department of Justice: The Department of Justice has put into effect two key applications that serve the citizens of Montana. The first is the Digitized Driver's License System. This system produces a driver's license that has a computerized digital photo and magnetic strip, where information is stored. This new card cannot be easily duplicated or altered.

The second system is the Automated Fingerprint Identification System (AFIS), which is a six-state cooperative network that captures electronic fingerprint images of individuals and stores them in a multi-state database. This system is utilized for checking criminal history records, searching for unidentified persons, and matching prints from crime scenes to more than 14 million prints available through the system. This system has been instrumental in matching crime scene fingerprints in more than a dozen serious crimes since its inception in December, 1992.

Montana State Library: The Montana State Library is working diligently to expand its client base of Internet users. This client base includes libraries, schools, and hospitals. Internet, a global network of networks, provides users with access to information from millions of diverse sources; such as universities, businesses, federal government, state governments, and international institutions.

Department of Revenue: The Department of Revenue is showcasing two new electronic tax systems.

The Electronic Tax Reporting for Employers System allows employers to file and pay state income tax withholding and old fund liability tax electronically.

The Montana/IRS Electronic Filing System allows taxpayers to file their income tax returns electronically. The system will be available in January, 1995.

Department of Social and Rehabilitation Services: SRS received national recognition from the U. S. Department of Health and Human Services for being the *first state* to have an automated child support system meeting the requirements of the Family Support Act of 1988. This Child Support System (SEARCHS) automates the financial management of child support collections, absent parent location, paternity establishment, case establishment, order modification, case management, and internal program management. Ninety (90) percent of the cost of this system was provided by the Federal government. Currently the system is being utilized by 140 caseworkers, attorneys, accountants, and administrative staff throughout the state.

State Fund: State Fund is redefining the way indemnity benefits are delivered to clients through imaging technology. Goals to be pursued in redefining this Benefits Information System (BIS) include: maximizing customer satisfaction and cost containment, empowering employees, streamlining daily activities, and migrating the business into a more advanced, flexible technological environment. The redefinition of this system is part of State Fund's proclamation of "Launching a New Era" for State Fund.

Preparing for the 21st Century

Information technology is a valuable state resource which is rapidly changing the way Montanans conduct business, receive services and education, work, learn, communicate, make decisions, enjoy recreation, and participate in state government.

Therefore, the Enterprise must (1) diligently implement and monitor the success of this Information Technology Plan; (2) must maintain active advisory groups who establish statewide direction and policy related to hardware platforms; enterprise software, security, purchasing, training, network cost recovery; and programming tools; and (3) must research and study emerging technologies; such as: imaging, electronic data interchange, voice/video/data integration, document management, multimedia technology, mobile computing, and data collection systems.

Conclusion

This *1996-97 Information Technology Plan* will assist government leaders and managers in managing information technology. It defines the direction the Enterprise needs to pursue in order to take advantage of this technology which can reduce the cost of delivering services; empowers and benefits citizens; enables personnel to work smarter; promotes economic development; and prepares Montana for networking with state, federal, and global networks.

PROLOGUE

What is Information Technology?

Information Technology (IT) is the employment of computer hardware, software, networks, and telecommunications. IT also enables state government to be more accessible, accountable, and efficient.

Information technology is a valuable asset to the State of Montana. Through focused planning and effective use of information technology, the state will:

- automate and streamline government processes
- improve lines of communication
- provide faster and more accurate services to the citizens of Montana
- promote economic development
- create a more responsive legislative process
- provide remote areas of Montana with services and information
- increase worker productivity by automating routine tasks
- provide electronic access to nation-wide and world-wide information networks
- monitor agency missions, goals, accomplishments, and mandates
- transmit essential voice, data, images, and video into classrooms, libraries, homes, public agencies, businesses, and private organizations.

What is Montana's Information Technology Enterprise?

Figure I: ***Pyramid A - Montana's Information Technology Enterprise***

Pyramid A illustrates **Montana's Information Technology Enterprise**. The **sides of the pyramid** represent the three government divisions of the Enterprise--(1) Advisory and Technical Groups; Information Technology

Advisory Council (ITAC), Information Technology Managers' Group (ITMG), (2) The Department of Administration - Information Services Division, and (3) Agency Information Technology Organizations.

Pyramid B illustrates the components of the Enterprise. These components build three levels of the pyramid.

- **Level One Components** define how the State of Montana provides an information technology foundation through progressive IT organization and environment, strategic planning, enterprise vision, and future technological directions.

- **Level Two Components** define how information technology is being used through agency plans and accomplishments, and ISD initiatives to provide more efficient government services.

- **Level Three Components** define directions taken by ITAC, ITMG, ISD, and Agency IT Departments as they serve and meet the public's demand for additional services.

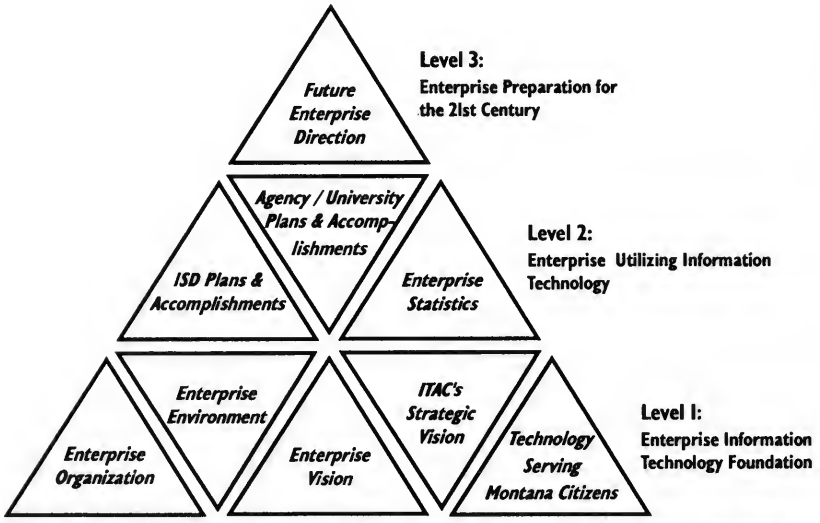


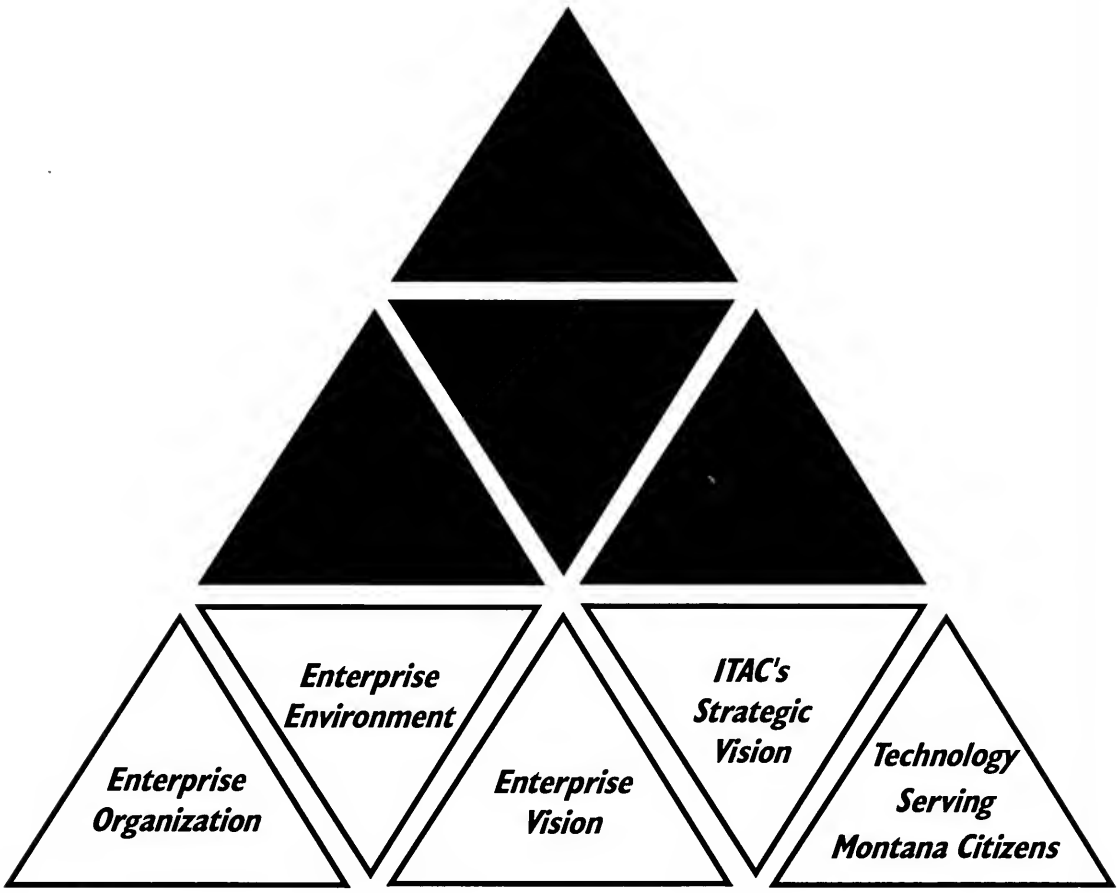
Figure 2: ***Pyramid B - Components of Montana's Information Technology Enterprise***

This pyramid is utilized and illustrated throughout this Plan to emphasize the **enterprise's** commitment and dedication to effectively employ information technology to bring about efficient and affordable government services to the citizens of Montana.

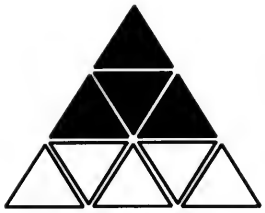
LEVEL I

STATE OF MONTANA

1996-97 Information Technology Plan



Level I: Enterprise Information Technology Foundation



ENTERPRISE INFORMATION TECHNOLOGY FOUNDATION

Introduction to Level I

Level 1 of the Information Technology Plan (Enterprise Information Technology Foundation) describes the State of Montana's information technology organization and environment and defines how this foundation is embellished through enterprise vision, strategic planning, and appropriate utilization of information technology.

This foundation is vital to Montana state government; and in order for the state enterprise to maximize the advantages and benefits of information technology (as listed in the Prologue), this foundation must be reliable, responsive, flexible, perceptive, progressive, and usable.

Fortunately, the state's information technology foundation has been:

- ***reliable and responsive***--even through reorganizations, FTE and budget cuts, and the emergence of technology which dictates change and retraining.

- ***flexible***, as it has met (and continues to meet) the state's demands for faster, more economic, and more efficient services.

- ***perceptive and progressive*** and has shown vision (technologically understanding where we are now and where we need to be in the future) through the development of an Information Technology Strategic Plan, the Statewide Information Technology Plan, the expansion of SummitNet, and the procurement of Oracle and NetWare licenses.

- ***usable*** as demonstrated by ISD and agency information technology accomplishments.

It is critical that state government maintain and expand this information technology foundation, because without it, planning efforts are insignificant, ineffectual, and unproductive.

ENTERPRISE ORGANIZATION

Preface

The first component of Montana's Enterprise Information Technology Foundation is the Information Technology Enterprise, or organization, which is composed of the Information Technology Advisory Council (ITAC) and the Information Technology Managers' Group (ITMG); The Department of Administration-Information Services Division; and Agency Information Technology Organizations. This enterprise is shown below:

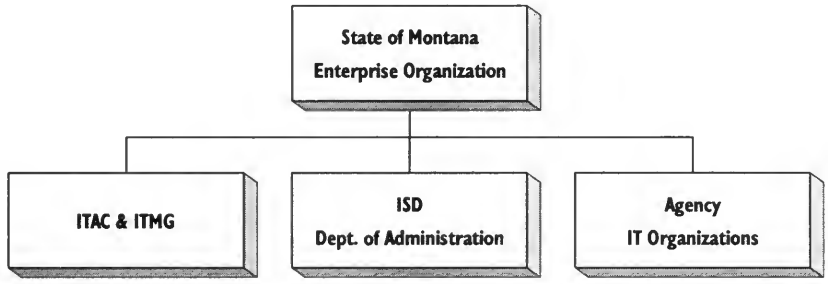


Figure 3: ***State of Montana Information Technology Enterprise***

ITAC and ITMG

ITAC: The Information Technology Advisory Council consists of agency directors; deputy directors; representatives from the executive, legislative, judicial branches; representatives from city/county governments, and representatives from universities. ITAC serves in an advisory capacity for: reviewing statewide information and data processing policies, making recommendations regarding the application of new information processing technology in state government, and advising the Department of Administration on long-term strategic planning for use of information processing technology in state government. ITAC recently published the 1994 *Information Technology Strategic Plan* containing recommendations to be implemented in order to bring about more efficient and cost-effective utilization of information technology in the State of Montana.

ITMG: The Information Technology Manager's Group consists of agency information technology managers or system coordinators; representatives from the executive, legislative, and judicial branches; representatives from city/county governments, and representatives from universities. ITMG (1) reviews and makes recommendations on enterprise information technology issues, (2) reviews and provides feedback regarding information management policies established by ISD, and (3) participates in the statewide information technology planning efforts.

Current ITAC and ITMG membership is listed in Appendix D.

Information Services Division

Information Service Division (ISD), is a division of the Department of Administration and has a two-fold mission: (1) to provide services and to assist state agencies in accomplishing their functions through cost-effective use of information technology including data processing, telecommunications, office automation, and application systems design and development and (2) to establish statewide information technology policies and strategic direction in order to meet future demand for services, meet federal mandates, and promote economic development. ISD's authority and responsibilities are described in MCA (Montana Code Annotated) Sections 2-17-501, 2-17-503, 2-17-301, 2-17-302, and 2-6-203.

In January, 1994, ISD was reorganized in order to improve information technology services to state agencies, to improve lines of communication internal and external to ISD, to provide a better environment for new application development and implementation, and to foster and promote statewide information technology strategic planning.

The following organizational structure reflects ISD's new structure.

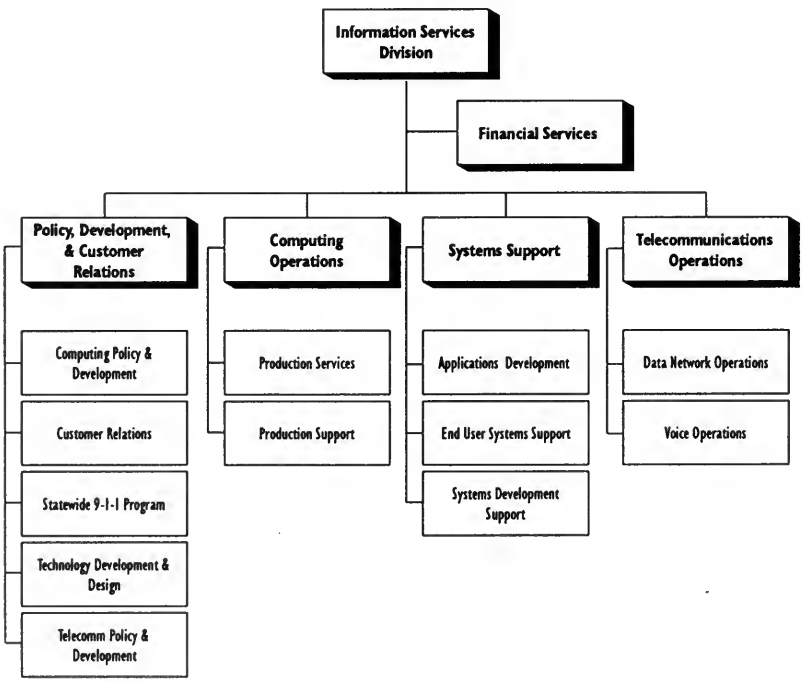


Figure 4: ***Information Services Division Organization Chart***

Policy, Development, and Customer Relations Bureau

The mission of the Policy, Development, and Customer Relations Bureau is to develop computing and telecommunications standards and policies, promote technology development and provide design services, manage the statewide 9-1-1 program, and provide division-wide customer relations. The 1994 ISD reorganization consolidated planning and policy development functions into this Bureau, and this consolidation improves the ability of ISD to establish appropriate directions for information technology in the state. In addition, the reorganization created a Customer Relations Section which provides communication to the agencies on ISD services and coordinates IT training offerings.

Computing Operations Bureau

The mission of the Computing Operations Bureau is to provide reliable, effective, and efficient automation services to state agencies twenty-four hours a day, seven days a week. The Bureau consists of the Production Services Section (responsible for mainframe computer operations and support) and the Production Support Section (responsible for the mainframe operating system, network interface support, and methods/media management). This Bureau is heavily involved in modernizing the state's mainframe data center.

Systems Support Bureau

The mission of the Systems Support Bureau is to provide information technology support and development services to information technology users. This bureau organization includes three sections: Applications Development; End User Systems Support; Systems Development Support. These sections provide professional systems development and support services; guide and support state agency selection and state employee use of standard hardware and software products; develop training curriculum; assist and provide problem resolution with current software products; evaluate new software releases and products; provide expertise to support standard desktop and mainframe software and products used by state employees; support the statewide enterprise electronic mail system and the Bulletin Board System (BBS); assist and support the use of systems development software and databases; provide guidance and assistance in systems and database design and problem resolution; provide support in the use of all major software development facilities and databases. The Bureau is placing an emphasis on developing the necessary expertise to provide these services in a client/server environment while continuing to maintain the expected level of expertise and support for mainframe systems.

Telecommunications Operations Bureau

The mission of the Telecommunications Operations Bureau is to provide cost-effective, reliable, voice and data telecommunication, wide area data network, local area data network, and distributed computing services for all state agencies, the University System, and other government units. The bureau is divided into two functional areas: Data Network Operations including Local Area Network Operations, Wide Area Network Operations, and Network Assistance Center; and Voice Operations including Video Operations. This Bureau provides first level support on telecommunications

and network problems; implements network adds, moves and changes; and manages the state's network operations.

Agency Information Technology Organizations

There is great diversity in the Information Technology (IT) environments of individual state agencies. Most agencies staff IT professionals to administer and maintain their automated systems. Individual agency IT staffs range from one Full-Time Equivalent to over forty. Approximately seventy percent of all IT professionals in the agencies are employed by eight of the larger agencies. The smaller agencies that do not have their own IT staff rely heavily on ISD to provide technical support.

Hardware platforms within the agencies are varied. While ISD centrally administers the only two mainframe computers in State government, many agencies maintain their own mid-tier and personal computer systems. Agency use of mid-tier systems is expected to increase in the coming years with the advent of client/server computing. There are currently no state standards in the mid-tier area but work is underway to establish standards and directions. Agencies have purchased personal computer hardware from ISD administered term contracts for several years. Our hardware uniformity promotes enterprise-wide connectivity and the ability to easily exchange information.

There is a wide variety of commercial and custom-written software in use by the agencies. All agencies have connectivity to ISD's mainframe. This connectivity is necessary to access statewide application systems such as payroll, P/P/P, Executive Budget System, and SBAS. There are literally hundreds of commercial software packages in use by the agencies. This proliferation is due, in large part, to two factors: prior to the 1993 Legislative Session, agencies were free to purchase software of their choice. House Bill 99 assigned ISD the responsibility for reviewing and approving agency software acquisitions. In assuming these responsibilities, ISD has established State standards in many software categories. Agencies comply with these standards, unless extenuating circumstances require an exception. A second factor is the mandate or need by some agencies to interface with either Federal government, local government, or the private sector applications. These interactions sometimes require the use of specific software which may not be a State standard.

Despite the diversity of agency systems and environments, state government has an unlimited potential to share information and resources across all agency platforms. This is made possible by the good working partnership between the agencies and ISD as manifested in the work of ITAC and ITMG.

ENTERPRISE ENVIRONMENT

Preface

The second component of Montana's Enterprise Information Technology Foundation is the Enterprise Environment shown below:

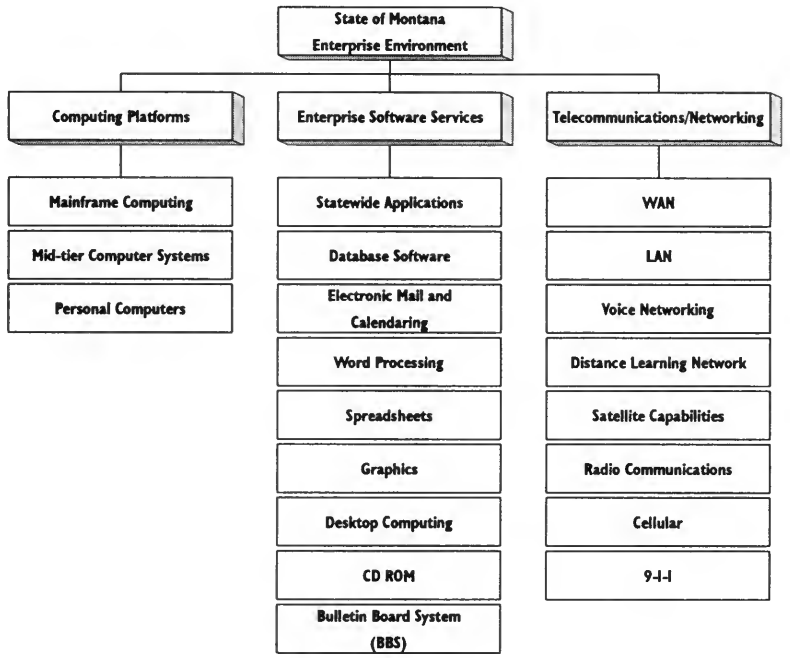


Figure 5: ***State of Montana Enterprise Environment***

This environment consists of computing platforms, software services, and the Statewide Telecommunications Network (STN) which encompasses statewide telecommunications and data networks.

The state takes an "enterprise" approach to the management and expansion of the enterprise environment, as state advisory groups, ISD, and agencies work together in setting standards for enterprise hardware, software, telecommunications, and networking procurements and maintenance. This "enterprise" approach is considered essential to the State for: guaranteeing hardware platform connectivity; promoting application and database sharing; insuring high transmission speed and performance (voice, data, video, and imaging); establishing worker competency levels and training; and procuring software which is compliant with established hardware and network standards.

This "enterprise" approach to managing the enterprise environment is also important because it brings about: faster, more convenient, and more accurate services to the citizens of Montana; promotes cost-effective utilization of information technology; and increases worker productivity.

Computing Platforms

The State of Montana develops and maintains applications on various computer platforms. Large, statewide applications are predominately run on the mainframe. Agency-level applications and database development reside on mid-range computers, with personal computers utilized for office tasks such as word processing, spreadsheets, electronic mail, terminal emulation, and small data management tasks.

Mainframe Computing

Although growth in the use of alternative computing platforms (personal and mid-range computers) has been dramatic, mainframe computing continues to grow significantly every year. Mainframe use in fiscal years 1993-1994 was 37% greater than fiscal 1992, and represented a five fold increase over 1989. This growth in mainframe utilization reduced computer processing rates, while improving performance and expanding services. See related Chart 8 "Mainframe Rates" and Chart 9 "Mainframe Usage" on page 136.

During the next five years, agencies will continue to utilize the mainframe to accommodate many automation needs. Improved price/performance of the Data Center (reflected in consistent, annual rate reductions) will continue to keep this platform competitive with alternative platforms. In addition, mainframe technology is yet unmatched in its ability to provide high performance computing and economical storage of vast amounts of information.

Mid-tier Computer Systems

At present there are no statewide standards, policies or ISD support for mid-tier computers. An ITMG subcommittee is exploring the mid-tier issue and will be setting mid-tier software and hardware standards in 1995. These enterprise mid-tier standards are necessary because mid-tier/client-server systems are becoming more prevalent in the state's environment.

Currently ISD works with each agency during the acquisition process to ensure that the desired mid-tier selection will function within the current network, will be adequately operated and supported by the agency, and is cost justified--not only from an agency point of view, but also from a state perspective.

Personal Computers

Currently there is an installed base of over 5,500 personal computers statewide, and nearly 1,100 network-connected terminals. The state standard for microcomputers is IBM or IBM compatible. ISD has established term contracts with three vendors: IBM, Digital Equipment, and Dell. Limiting the number of manufacturers has enabled the state to standardize on key system components and develop and maintain a well supported, reliable "enterprise" network. ISD manages the term contracts, and is responsible for reviewing and approving these acquisitions.

During the next five years, the State anticipates adding or replacing 500-1000 microcomputers per year.

Enterprise Software Services

The state has many examples of enterprise software systems, including the Statewide Business Application Systems described here. In the past biennium, the emphasis on enterprise solutions has been demonstrated by the cooperative efforts put forth by ITAC, ITMG and the agencies in the selection of client/server database software and the establishment of a new Local Area Network operating system standard.

Statewide Applications

Several large, statewide applications exist to support agency administrative activities. These systems provide centralized functions, primarily on the mainframe platform, and include the Statewide Budgeting and Accounting System (SBAS); Payroll, Personnel, and Position Control (PPP); and the Warrant Writing System. These systems are used by all state agencies and provide a single, consistent means to accomplish common administrative processes. These systems have been in existence for over a decade, and have evolved as information technology has advanced.

Database Software

By 1977 it was becoming increasingly difficult to implement large and complex application systems with existing software. As a result, mainframe database management systems (DBMS) were evaluated and the Integrated Database Management System (IDMS) was selected as the mainframe database product. From its initial use until the early 1990's, there was little interest in common use of data to avoid duplicative efforts of capture and maintenance, especially across agency lines.

However, as more and more agency programs were automated, duplicate efforts became apparent and management became aware of the potential benefit of sharing resources. Also, major developments in technology allowed for more computing power at the desktop. Therefore, in 1992 ITAC and ITMG adopted the Data Sharing Resolution. (See Appendix F: Data Sharing Resolution.)

In 1993 a subcommittee of ITMG was formed to define the State's database direction in order to promote the sharing of agency data. The subcommittee studied and evaluated the technology available and addressed the need to share data across all platforms and between agency databases. In the spring of 1994 ITAC adopted Oracle Corporations' Oracle 7 software as the relational database standard for the state, which has culminated in a contract for statewide enterprise database software. Agencies now have the ability to develop applications on several platforms and share information across agency lines.

Electronic Mail and Calendaring

Electronic mail (E-mail) is extensively used in state government for exchanging messages, documents, and files. Utilization of e-mail brings about worker productivity gains, cost savings, and faster, more efficient service delivery.

The State's "enterprise" e-mail system consists of several products--ZIP!Mail or ZIP!Office on PCs and EMC^2/TAO on the mainframe. In addition, several state agencies and university units with DEC VAX minicomputers are also connected. There are currently over 2,500 ZIP!Mail & ZIP!Office users, 800 EMC^2 users, and 365 DEC users connected to the enterprise e-mail system. These numbers will continue to grow until all state "information workers" have e-mail capability. E-mail will soon be the most widely used application in state government.

Electronic calendaring is used by many workers for scheduling meetings and appointments. The state standard product for calendaring is ZIP!Office. Many of the original ZIP!Mail users (e-mail only) are now converting to ZIP!Office in order to have this calendaring capability and in order to take advantage of ZIP!Office's Windows interface. In addition, users of our previous mainframe calendaring software, Personal Manager (PM), are converting to ZIP!Office.

Word Processing

WordPerfect has been the state word processing software standard since 1984, is used on the majority of PCs in state government, and is currently the most widely used application in state government. WordPerfect runs on both DOS and Windows PCs, as well as on some of the DEC VAX systems. As users convert to the Windows version, they utilize more of its "desktop publishing" capabilities.

Spreadsheets

Lotus 1-2-3 has been the state spreadsheet software standard since 1984, and runs on both DOS and Windows PCs. It is extensively used in all agencies and department applications.

Graphics

Lotus Freelance and CorelDraw are the State graphic software standards. Lotus Freelance is used for creating business charts, graphs, and slide shows. The Window's version of Freelance uses "point-and-click" so effectively that even novice users can create stunning presentations. CorelDraw is a high-end drawing package used for more technical or complex drawings.

Desktop Computing Services

State agencies use a variety of desktop application software packages which allow workers to: communicate and exchange information and documents with other state employees; create documents; and create tools that support information analysis and presentation. Standards for desktop computing services and products have been established, as use of standard products facilitates the exchange of documents, data, and information among employees and work units, and facilitates the training of employees. Windows was established as the standard graphical user interface (GUI) product for those agencies needing the GUI environment. Since many agencies have not made the transition to the Windows environment, both Windows and character based versions of standardized software are used by the agencies.

CD ROM

The state utilizes CD ROMs (optical disks) for accessing vendor manual documentation and information, IT magazine and report articles, MCA (Montana Code Annotated), and resolution of IT technical problems. ISD has a central CD ROM tower which is accessible by users on the capitol complex backbone, and many users have personal computers with CD ROM drives. Because of the CD ROMs speed and capability to store millions of characters of data and speed, the State anticipates utilizing this technology extensively. CD ROMs can now be produced in-house with relative economy.

Bulletin Board System (BBS)

ISD offers a central BBS which provides pertinent agency information to the public. As a result of legislation revising Section 2-17-322 MCA, during FY94 the capabilities of the BBS were enhanced. It now provides multi-user access through in-state 800 and local Helena phone numbers, and through the state's capitol complex backbone. A wide variety of information from state agencies is available--including road and weather reports, legislative information, agricultural information, Supreme Court decisions, public meeting notices, board vacancy notices, etc. Use of the BBS has grown steadily with a average of 2,700 calls per month in FY94. See related Chart 7 "State BBS Usage" in the Enterprise Statistics section on page 135. Continued growth is expected, and future plans call for connecting the BBS to the State's electronic mail system and to the Internet.

Telecommunications/ Networking

The State Telecommunications Network (STN) provides voice, data and video communications to state and local government, law enforcement agencies, and educational institutions throughout the state. The STN is built on leased facilities from telecommunications companies and state-owned facilities. The STN currently supports telephone communications as well as data communications for all state agencies. In addition, the STN manages two-way, interactive video communications between eight cities, and supports two-way radio communications and FM radio broadcasts (KUFM).

This "enterprise" network is one of Montana's greatest information technology strengths, as substantial savings are realized through the economies of scale of managing one network for the entire state. The expansion of the network will continue to grow over the next five years and will provide improved capabilities for voice and data traffic, video, two-way radio and wireless transmissions, and broadcast radio and public TV signals.

Data networking is probably the most complex element of the state's enterprise networking environment, as data networking involves interfacing diverse applications and data located on different computing platforms.

As agencies look at data sharing, downsizing, and the re-engineering of applications and processes, the enterprise must be pro-active in procuring a solution for interfacing heterogeneous databases.

Wide Area Networks

Most of the state's computers are connected through the facilities of the State Telecommunications Network (STN). Two Wide Area Networks (WAN) operate over the STN: The SNA network (IBM's System Network Architecture) and SummitNet (State and Universities of Montana Multi-Protocol Network). See "SummitNet: Montana's Network of the Future" in the Enterprise Vision section on page 25. SNA is utilized by agencies to connect to the state's IBM mainframe, and SummitNet provides state agencies and universities multiple computing platform interconnectivity. Both of these networks are managed by ISD.

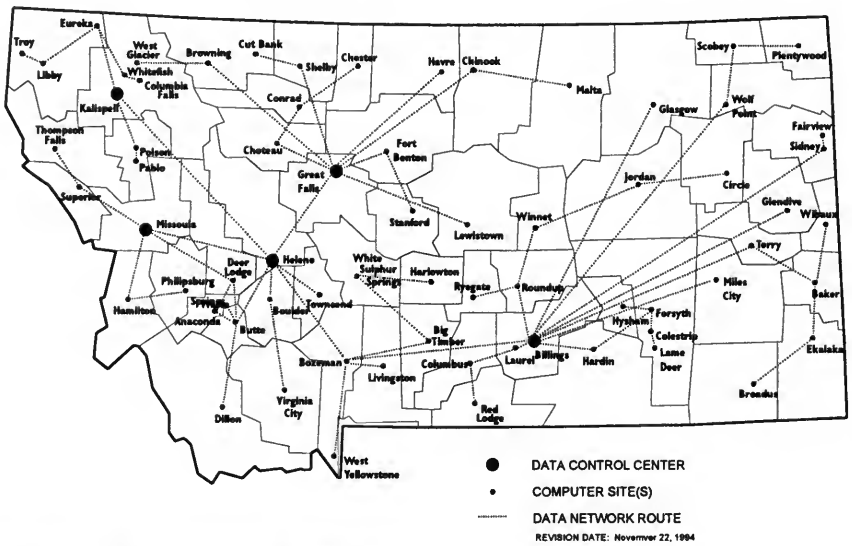


Figure 6: ***State of Montana Data Network***

SNA links 4300 devices at 450 sites to the mainframe computer located in Helena. This network has been in place for 17 years, and has provided reliable, manageable, efficient, and cost-effective networking services.

SummitNet has been in existence for four years, handles different types of network traffic, and offers more functionality than the SNA network.

During the next five years the state will see an increase in the number of applications residing on these networks, and this increase will bring about more network users and more demand for services. Anticipating this, the state has initiated a SummitNet upgrade and expansion which will handle the increased network traffic and link 64 cities in all of Montana's 56 counties.

Local Area Networks

Computers within an office or a building, or within a local campus area, are connected by networks called Local Area Networks (LANs). LANs first began to appear in the State around 1987 and have expanded so rapidly that today virtually all the State's computers are attached to a LAN. They are primarily

used to share computer disk, computer software, printers and other resources among many personal computer users.

ISD manages LANs in counties throughout the state, these LANs provide communication facilities for all state agencies to share. LANs are typically connected through the State's existing wide area data network or the Capitol Complex fiber optic backbone.

By the end of fiscal year 1995, ISD will have expanded the Capitol Complex fiber optic backbone to serve 14 buildings. This backbone handles LAN traffic and will eventually serve voice and video needs in the future. It is anticipated that the fiber optic backbone will provide agencies with a single high speed LAN to meet future LAN connectivity needs for at least ten years.

During the next five years, LAN traffic will continue to increase as agencies connect approximately 500-1000 microcomputers a year to the existing installed base. Agencies, and state government have become reliant on LANs to accomplish their responsibilities.

Voice Networking

ISD provides agency telephone service to all sites throughout the State. In cooperation with the University System, ISD manages telephone switches at 19 sites, including six in Helena and eight at the University units. These 19 telephone switches are connected through the facilities of the STN, allowing the state to carry most of its internal traffic on the network without incremental long distance charges.

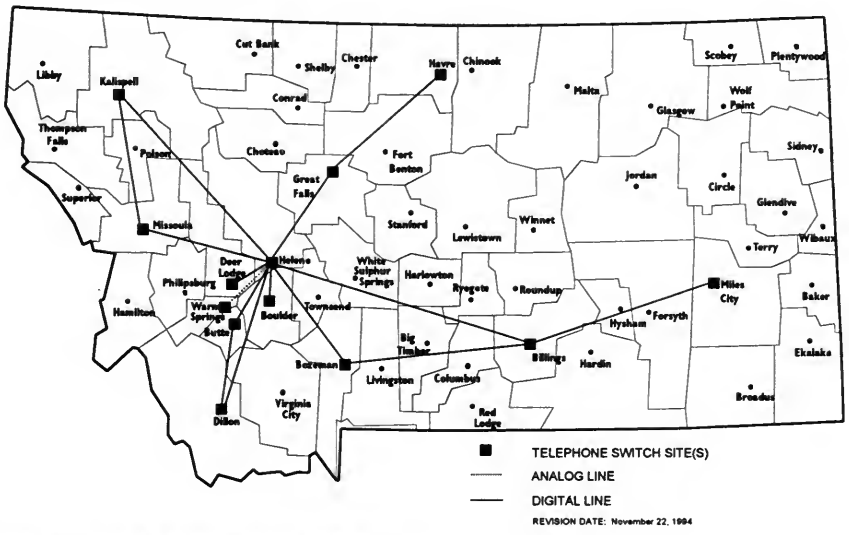


Figure 7: ***State of Montana Voice Network***

The STN provides local- and long-distance calling capabilities for agencies throughout the State. ISD maintains contracts with AT&T, Sprint and U.S.

West for intrastate, interstate, and international calling. This provides the State with substantial long-distance savings on calls made from state facilities or with a state credit card. During the next five years the state will continue to contract for local- and long-distance circuits in order to meet the increased demand for voice, data, and video communications.

The state began the active management of telephone systems in 1982 when it acquired its first Private Branch Exchange (PBX). Since that time eighteen additional PBXs, which manage over 17,000 telephones, have been purchased. These PBXs provide on-campus and local calling services, and give access to the STN for long-distance calling. Additionally, these systems provide 800 services, fax communications, dial-in data calling, voice mail features, access for telecommunications devices for the deaf, and operator services. The State's PBXs also provide telephone management, limited WAN, SNA, SummitNet data circuit management, and METNET video image management. During the next five years the state will continue to upgrade PBXs in order to improve service capabilities and in order to achieve telecommunication cost savings.

Distance Learning Networks

The Montana Educational Telecommunications Network (METNET: Two-way Interactive Video Network), managed through the University System, the Department of Administration, and the Office of Public Instruction, provides distance learning opportunities for the State of Montana. The system is used primarily for the delivery of classroom instruction, in-service training for teachers, and interactive video conferences.

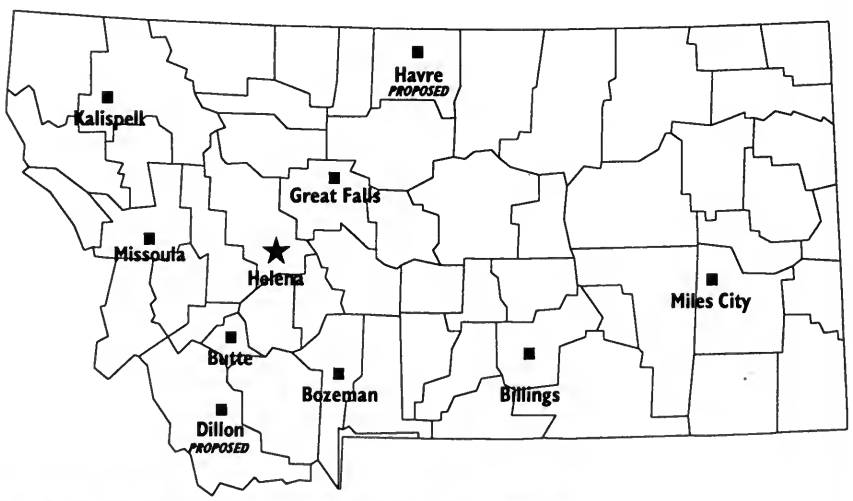


Figure 8: ***METNET Two-Way Interactive Video Site Locations***

Through METNET, Montanans are able to teach, learn, and share educational resources and opportunities. Virtually all types of telecommunication technologies and resources are utilized in METNET,

including computers and data networks, satellite, interactive video, public telephone networks, and fiber optics. METNET video technology is based on two-way interactive video systems located in various cities throughout the state. In 1992, systems were installed at four sites: Helena, Bozeman, Missoula, and Billings. In 1993 and 1994, systems were installed in Miles City, Kalispell and Great Falls.

In addition, an agreement has been recently established with the Montana Power Company subsidiary ENTECH, which establishes a METNET site in Butte. Another agreement was established with the Deaconess Medical Center in Billings that allows the interconnection with their video system. Testing is currently underway to study the feasibility of interconnection with a video system operated by Mid-Rivers Telephone Cooperative in Eastern Montana.

Over the next five years METNET will continue to deploy video network equipment at additional sites. Plans are currently underway for two sites in Dillon and Havre. METNET has been and will continue to be a highly visible and successful program for the State of Montana.

Satellite Capabilities

Satellite communications offer access to distant instructors and programming. METNET has actively pursued the deployment of satellite technology to various K-12 schools and university units, and currently there are over 260 satellite systems installed.

The satellite uplink/transmitter is located at Montana State University--Bozeman. This uplink/transmitter provides an origination point for in-state satellite video programming and provides an inter-connection to the METNET which gives users the ability to transmit programming to other METNET sites in the state. Educational, training, and public service broadcasts originating at interactive sites are carried to the uplink, transmitted to satellites, and received by METNET-receive sites.

Radio Communications

The Department concentrates its radio planning and development activities in three areas: mutual aid communications, spectrum management, and future systems. In anticipating the State's long-term wireless communications needs, it focuses on both conventional land-mobile systems, such as those used by public safety agencies for dispatching personnel, and more advanced services such as cellular telephone and mobile data terminals. Technology is blurring the distinction between not only wired and wireless communications, but also between closed, private systems and open, common carrier services. The Department will work to accommodate today's needs while planning orderly, efficient transitions to tomorrow's technology.

Mutual aid communications have proven to be a keystone for effective interagency cooperation during emergency response. Plans, policies and procedures have been developed which describe how shared radio frequencies licensed by the State can be put to use during incidents of all size. The

Department recently printed 3,200 copies of the second edition of its mutual aid communications handbook and has distributed it widely. The popular publication is used for public safety planning from the smallest fire departments to the largest state agencies, as well as for communications training throughout the state.

As the Federal Communications Commissions (FCC) liaison for public safety frequency assignments in Montana, the Department is heavily involved in coordination issues with state and local agencies. It makes use of an advanced computer system in providing technical assistance to those agencies, both for system design and assignment of appropriate radio frequencies. This "Spectrum Management System" has garnered attention from U.S. and Australian federal authorities because of its innovative use of advanced computer technology.

Planning is underway for Montana's next generation of public safety and general government radio systems. Pending FCC rules and regulations threaten to dramatically alter the radio landscape as we now know it. This action - commonly referred to as the FCC's "refarming" proposal - would require replacement of all equipment over the next 10-20 years with technology not yet developed. Though they will likely be moderated, the rules and regulations as proposed would cost Montana state and local government radio users upwards of $25 million by 1996 for changes that would provide very little in return.

Over the past biennium, the Department has taken a proactive approach. It has worked heavily to influence the refarming proceeding with positive results for Montana radio users. The FCC has further delayed its final report and order until at least 1995, giving small and rural government agencies room for planning. This respite has allowed the Department's task force of state and local public safety representatives time to prepare for regulatory changes, technological advances, and increasing user needs. The Public Safety Communications Task Force is guiding development of the next generation of radio systems for use between multiple agencies and levels of government. It is expected to oversee work of a radio network architecture consultant through the next biennium.

Cellular/Wireless Systems

Planning for more advanced wireless communications services has paralleled that for traditional land-mobile radio. Cellular telephone use by state agencies is growing and quickly becoming an effective communications tool for agency personnel. While we expect growth to stabilize over time, a 50% biennial growth rate in the number of State cellular subscribers will continue through FY96-97. As a technology which marries telephone and radio, cellular service is being used to provide mission-critical communications for the Departments of Agriculture, State Lands, FW&P, Transportation, and several units of the University System, among others. It is found to be particularly useful for workers who travel a great deal and for those not supported by the State's existing radio systems.

During the next five years, cellular service will expand into more and more communities throughout Montana while subscriber costs decline. This combination of trends will make cellular telephone more attractive and viable for state agencies. In order to offer standard services for state agencies desiring cellular service, ISD is currently working with agencies to define their needs, with the prospect of bidding for standard contracts from service providers.

With a tremendous flux present in land-mobile radio, the Department understands the need to coordinate growing use of cellular telephone and advanced wireless services with its other initiatives. Wireless services in general are taking a larger communications role nationwide - the State of Montana is no exception. Cellular or similar technologies may at times replace telephone systems in our offices, providing greater worker mobility, reduced office relocation expenses, and less reliance on wireline networks. Whether through shared government systems or public networks, agencies without radio service today will tomorrow have mobile communications for improved worker safety and responsiveness to the public.

9-1-1 Service

The Statewide 9-1-1 Emergency Telephone System Program has been in place since 1987. ISD is charged with administering the funds and assisting local communities to plan and implement emergency telephone systems using 9-1-1. Funding for the implementation and operation of emergency telephone systems is generated through a monthly 25-cent fee on each telephone subscriber's access line, with some exceptions for non-taxable entities. The funds collected are allocated to local governments on a per capita basis after expenses for program administration and telephone switching equipment changes for basic 9-1-1 service are deducted.

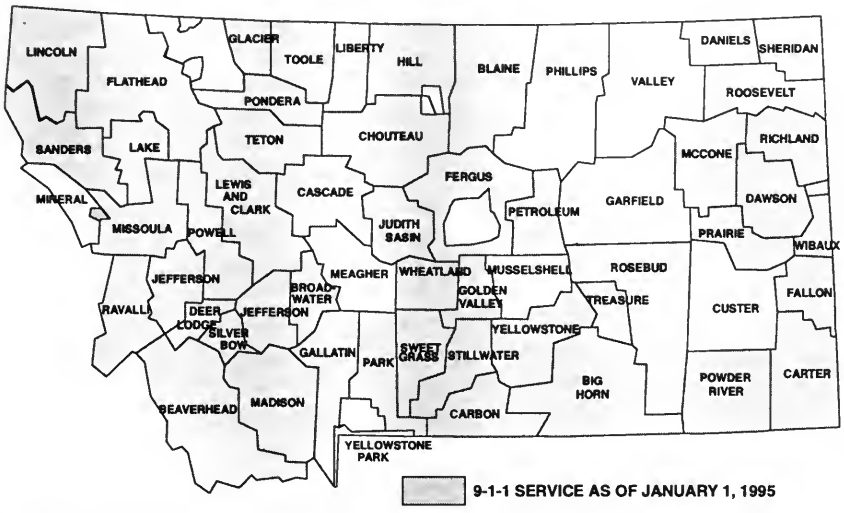
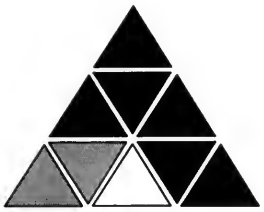


Figure 9: ***Montana Counties/Areas with 9-1-1 Service***

Most of the state's 9-1-1 systems provide only minimum service, although there are a few systems which automatically display the telephone number of the calling party. Some systems do not have dedicated 9-1-1 circuits, which means 9-1-1 callers compete with other telephone users for time on the public switched telephone network, and could have an emergency call blocked. Implementing enhanced features such as Automatic Number Identification (ANI) and eliminating call blocking potential through the public network are priorities for many 9-1-1 systems in Montana.

During November 1994 the Department of Administration's 9-1-1 Advisory Council was re-instituted to provide guidance to the State 9-1-1 Program in addressing issues confronting emergency telephone systems statewide. Issues currently under discussion include: a model system for minimum levels of 9-1-1 emergency telephone service; equal access for all emergency callers using 9-1-1; and the exposure to liability associated with 9-1-1 call takers providing instructions to callers prior to the arrival of emergency response units.

By January 1, 1995 there will be forty-nine 9-1-1 emergency telephone systems available for public use throughout the state. Approximately ninety-three percent of the state's population in forty-eight of the state's fifty-six counties are served by these systems. Nine additional areas are actively planning for 9-1-1 implementation.



ENTERPRISE VISION

Preface

The third component of the Enterprise's Foundation is *Enterprise Vision*--defining future information technology direction for bringing about long-term benefits and services to the citizens of Montana.

Montana's enterprise vision has come about as the result of: (1) ISD's reorganization and direction (2) Governor Marc Racicot's 1993 challenge to ITAC to complete an Information Technology Strategic Planning Process and (3) agencies' progressive utilization of information technology to bring about better services.

Presented below are five recent products of Montana's Enterprise Vision. These products relate to the expansion of our statewide network (SummitNet), state personnel and citizenry access to Internet, selection of a state Local Area Network technology (Novell), formulation of state database directions (Oracle), and utilization of IVR, Interactive Voice Response, to allow the public direct access to database information.

SummitNet: Montana's Network of the Future

SummitNet is a pre-existing network which provides data communications services for Montana's fast growing multi-protocol network environment. This network connects the State's local area networks (LAN's) with the growing base of mid-range computers being installed in State agencies. While SummitNet currently links only twelve cities in twelve counties, its proposed expansion and upgrade would result in a true peer-to-peer digital network linking sixty-four cities in all of Montana's fifty-six counties, including its entire university system and all seven of its Native American tribal colleges. Conceptually, SummitNet can be compared to the Montana's highway system. Just as highways link Montana's cities and their respective streets, SummitNet links the various computer networks operated by Montana's schools, libraries, universities, tribal colleges and government agencies. SummitNet is representative of the shift away from the mainframe centric paradigm whereby a mainframe computer provided services to dumb terminals spread across the network. The new paradigm is the distributed network which has the computing resources deployed throughout the network in the form of intelligent terminals (a.k.a., personal computers) and mid-range computers.

Though SummitNet is configured as a backbone system, the end-result of the proposed expansion and upgrade will be to provide the mechanism for the interconnection of the State's schools, libraries, universities, tribal colleges and government agencies (state and local) as well as provide private sector access to State information. In most cases routers will be physically located on the premises of these institutions and facilities. Interoperability and access to other networks and devices will be ensured by the TCP\IP protocol. Additionally, existing State networks running in an SNA environment would

migrate over to SummitNet's TCP\IP environment. The expansion and upgrade would be accomplished using services and technologies such as frame relay, remote routing, remote access dial-in hubs, and high-speed data circuits. With few exceptions, SummitNet will utilize services and technologies provided over the existing public network.

The improved SummitNet configuration will be capable of carrying distance learning and telemedicine programs, in addition to providing access to the Internet. Numerous Montana state agencies have requested access to the Internet including the Montana State Library's Natural Resource Information System/Geographical Information System (NRIS/GIS) group in order to effectively disseminate and share geographical information with their counterparts in both the private and public sector. Additionally, County Libraries require access to state, regional and national library on-line reference catalogs. The Department of Health is being requested to provide database and other information to Federal programs, hospitals, doctors offices and other health care providers via the Internet. Other agencies (DNRC, Department of Revenue, Legislative Council, Department of Commerce, Department of Justice, OPI, FWP, Silver Bow County, Lewis & Clark Library) have all indicated that Internet access would allow them to become more productive.

SummitNet represents a cost-effective and efficient network plan in large part because of its reliance on the public network. This reliance allows today's SummitNet to utilize frame relay service while tomorrow's SummitNet can easily switch over to new services such as Asynchronous Transfer Mode (ATM). The ability to take advantage of new service offerings on the public network helps SummitNet guard against obsolescence while at the same time promoting flexibility. In regard to frame relay service, it should be noted that SummitNet will represent the first deployment of this service in Montana. Consequently, some Montana communities will experience the benefits of frame relay sooner than otherwise, because of the deployment of SummitNet.

While the SummitNet proposal is certainly justified by changing technology and cost-effectiveness, emerging customer needs have proven to be driving forces in the proposal's development. For example, the Montana Department of Justice (MDOJ) interconnects its Criminal Justice Information Network (CJIN) with the National Crime Information Center's (NCIC) law enforcement network. NCIC has defined a replacement technology for its network that will be favorable to interconnecting networks running in a TCP\IP environment. Since CJIN currently runs in an SNA environment, the MDOJ strongly supports the proposed migration to SummitNet's TCP/IP environment. Another example is provided by the Montana Department of Health, which has two client/server health care systems requiring implementation on a state-wide basis. The two projects, Electronic Birth Certificate System and National Immunization Program will require the LAN connectivity provided by SummitNet to communicate with county health departments, hospitals, doctor's offices, and other interested

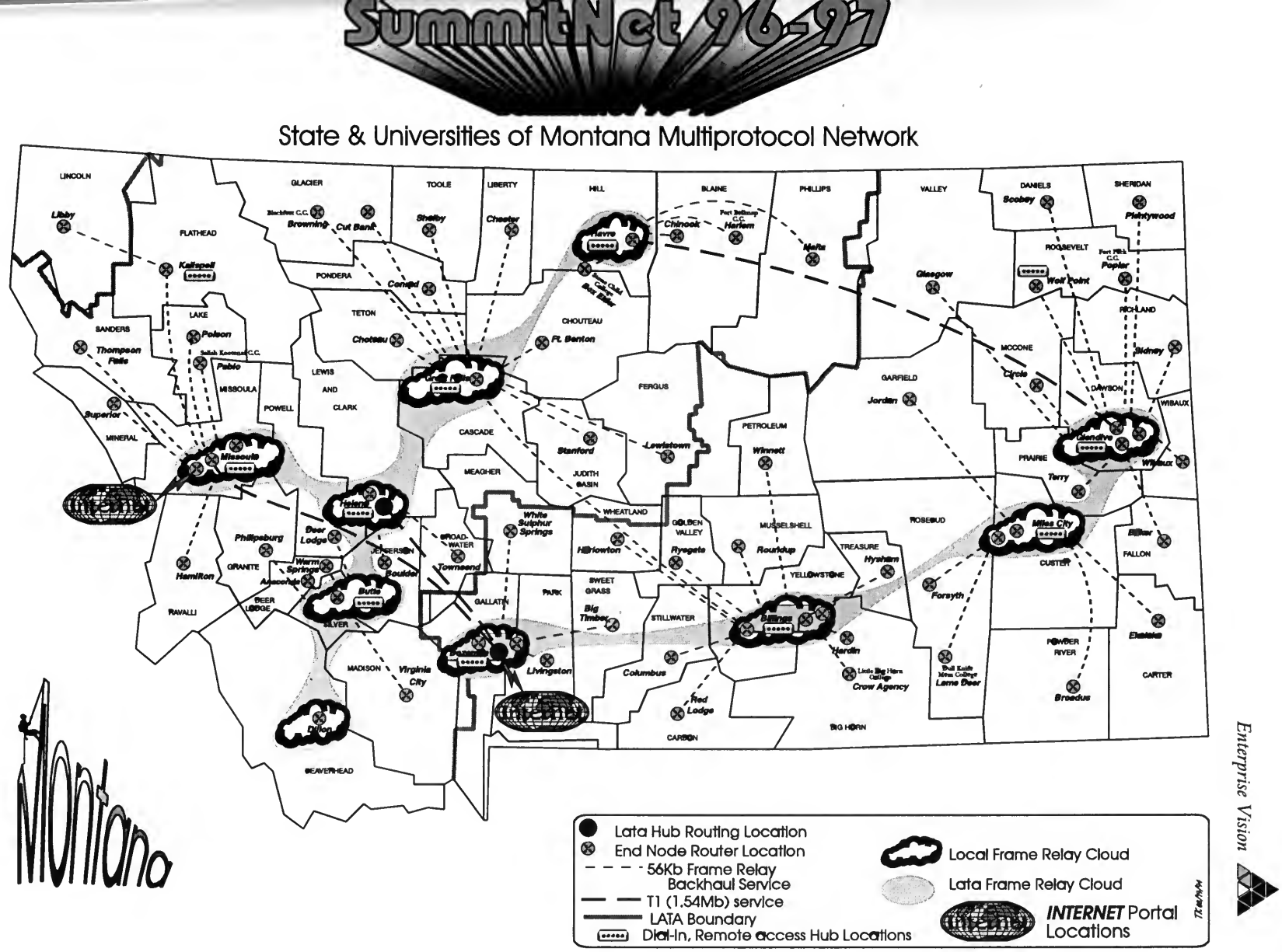


Figure 10: ***SummitNet 96-97***

health care providers. Of course, the need for this type of network connectivity also has been expressed by other agencies as well as local governments, libraries, schools and universities.

The SummitNet proposal is the culmination of a collaborative process involving state and local government agencies, public interest groups and the private sector. The involvement of these diverse interests in the development of the proposal has resulted in broad-based support for the final product. SummitNet represents the future of information and network technology in Montana. With its vast size, sparse population density, and diverse educational structure, the State of Montana requires an advanced telecommunications infrastructure to take advantage of all the benefits and opportunities of the information age. In this regard, the SummitNet proposal represents a major step forward in the deployment of such an infrastructure.

Network Operating System: Novell

In the "Personal Computer Directions" document (1991), Novell NetWare was selected as the standard for the State's Local Area Network (LAN) operating system. In early 1993, an Information Technology Managers Group (ITMG) committee was formed to determine the best means to procure and implement Novell NetWare on a statewide enterprise basis, as prior to this time, agencies were responsible for acquiring NetWare on an individual basis.

ITMG accepted the following resolutions proposed by the subcommittee:

- "The State of Montana is the enterprise. The goal of the NetWare 4.0 implementation committee is to reflect that enterprise."
- "Full implementation of the State of Montana enterprise requires one root NDS."
- "The root NDS needs to be administered centrally to be successful. It is the committee's recommendation that this responsibility lie with ISD."
- "The committee recommends that Section III and appendices of the 'Enterprise Information System for State of Montana' document be adopted as draft guidelines and standards for comment by ITMG."
- "The committee recognizes that moving to NetWare 4.x is a long-term migration, and that exceptions may be necessary in specific implementations."

The committee determined that the best interests of the enterprise would be served by purchasing Novell NetWare through a Master License Agreement (MLA) to be negotiated and managed by Information Services Division (ISD). With concurrence by the full ITMG, the recommendation was proposed to the Information Technology Advisory Council (ITAC) in the

March, 1994, meeting. ITAC concurred with the ITMG and recommended "that the State acquire a single NetWare license to be implemented as the enterprise solution...." (see recommendation #6 of the Coordination Task Force in the Information Technology Strategic Plan). In April of 1994, a two year contract was signed with Novell for NetWare licensing for the State.

Agencies have begun to depend on networks extensively to conduct their business. The need to manage the State's networking environment as an enterprise has emerged as a result of advances in networking technology, and the value derived from sharing information, as noted in the Data Sharing Resolution adopted by the Data Processing Advisory Council (DPAC) now known as ITAC, in 1992. The enterprise approach to managing the State's network, in addition to standardizing and facilitating interagency and public access, will minimize personnel, software, and hardware costs that are increasingly necessary in order to operate and support the environment.

Database Management: Oracle

In April, 1993, the Database Directions Committee formed by the Information Technology Managers Group (ITMG) released a report entitled "Database Directions - Standards and Recommendations". The report specified the technical environment for implementation of Relational Database Management System (RDBMS) technology within the State.

With the adoption of the report, the ITMG formed a Database Directions Management Committee to make an RDBMS selection. The committee described a general "vision" which identified a shift in emphasis from mainframe (central) processing to LAN (decentral) processing using an RDBMS in a client/server architecture. Reasons cited for the shift include: control, flexibility, ease of use, and cost reductions.

The extent to which the selection would support the information technology mission was the most important selection criteria. The information technology mission is clear. We must empower our State workforce (employees at all levels within the organization) to get their jobs done in the most productive, cost-effective way possible.

Based upon the technical and business criteria, ORACLE was determined to be the RDBMS of choice by the ITMG committee. With concurrence of the full ITMG, the recommendation was proposed to ITAC in the March, 1994, meeting. ITAC concurred with the ITMG and recommended "that the State acquire a single database to be implemented as the enterprise solution...." (see recommendation #5 of the Coordination Task Force Report in the Information Technology Strategic Plan). A five-year contract was finalized with Oracle in May, 1994, and provides a RDBMS site license for the State of Montana.

Interactive Voice Response (IVR) technology is considered to be "tele-computing", a combining of telephony and computing that eliminates the need for operators to perform keyboard entry on screens of data. The IVR

Interactive Voice Response

system allows the public to directly access public or personal information in computer databases by telephone, and to enter or manipulate data by the use of a touchtone phone or verbal input.

The IVR system "translates" computer information into speech or vice-versa. It accomplishes this by using a combination of pre-recorded verbal prompts and synthetic voice. The more sophisticated systems can also "listen" to speech input from users and translate it into digital format, known as "speech recognition".

The Department of Social and Rehabilitation Service's Child Support payment status is the first application scheduled to go into service on the IVR system. Users will be able to access information on the amount and status of their child support payments. The second application will be the Department of Revenue's tax refund status, where taxpayers will be able to access information on the amount and status of their tax refunds. The third application will be The Department of Labor and Industry's Unemployment Insurance payment status, followed by Unemployment Insurance's benefits telephone filing of continued claims. Users will be able to access information on the amount and status of their unemployment payments. In addition, users will be able to update their unemployment account information by telephone in order to receive unemployment benefits. These IVR applications are scheduled for implementation in early 1995.

Future applications for IVR are being planned by the Department of Justice, Motor Vehicles Division. Other agency applications will be designed as needs are established.

While other states have implemented this technology within individual agencies, the State of Montana is one of the first to provide this as a centralized statewide service.

Consolidated Public Safety Radio Network

Pending Federal Communications Commission rules and regulations portend dramatic changes in the radio landscape. Implementation of these changes could cost the State and its subdivisions as much as $25,000,000. A consultant will be hired to investigate the existing state and local public safety radio systems and to provide a technical system design for a shared radio network.

Capital Complex Building Rewire

This rewiring project will replace wiring in the capital complex buildings and will support voice, video, and data transmissions.

ITAC'S STRATEGIC VISION

Preface

The fourth component of the Enterprise Foundation is Strategic Planning. In September of 1993 the Information Technology Advisory Council (ITAC) and Information Services Division (ISD) embarked upon a strategic planning effort under the direction of Charles Finn of the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota.

In the first phase of the process ITAC members and ISD staff were involved in a two-day workshop analyzing the State's information technology environment and identifying issues which needed to be addressed in order to produce an enterprise strategic plan. **Four task forces were developed (Access and Privacy, Coordination, Funding, and Training) and 31 information technology issues were researched and defined. Afterwards, recommendations were formulated. A complete listing of the issues and recommendations are included in Appendix C.** Copies of ITAC's 1994 *Information Technology Strategic Plan* are available upon request by contacting Wendy Wheeler at ISD (406/444-2856).

As a follow up to the strategic planning effort, an action plan was developed for implementing the recommendations. Each recommendation has one or more actions; and each action has an assignment, a responsible entity, and an anticipated completion date. This action plan will be used by ITAC and ISD to insure that the strategic plan becomes measurable. Following is a synopsis of these issues and recommendations from the four task forces:

Access & Privacy

- Perhaps one of the most important recommendations concerning access and privacy is the recommendation that "the State of Montana adopt a vision that is flexible and responsive to citizen needs and demands--a vision that would guide information technology planning and development to take advantage of current and future service delivery and/or access technologies for citizens..."

- The state should actively participate in and use manifestations of the electronic data superhighway (for communication and exchange of information).

- The state should pursue the use of IT as a means for service delivery including the use of electronic transactions and coordinated, integrated access from a variety of convenient locations.

- The state...should adopt a policy defining state agency personnel responsibilities regarding communications privacy...

- The state should continue with the current practice of providing private sector access on a case-by-case basis...

Coordination

- The state should reaffirm previous...efforts, endorsing in concept the importance of coordinating technology, including the concept of data sharing...
- The state should acquire a single database to be implemented as the enterprise solution.
- The state should acquire a single NetWare license to be implemented as the enterprise solution.

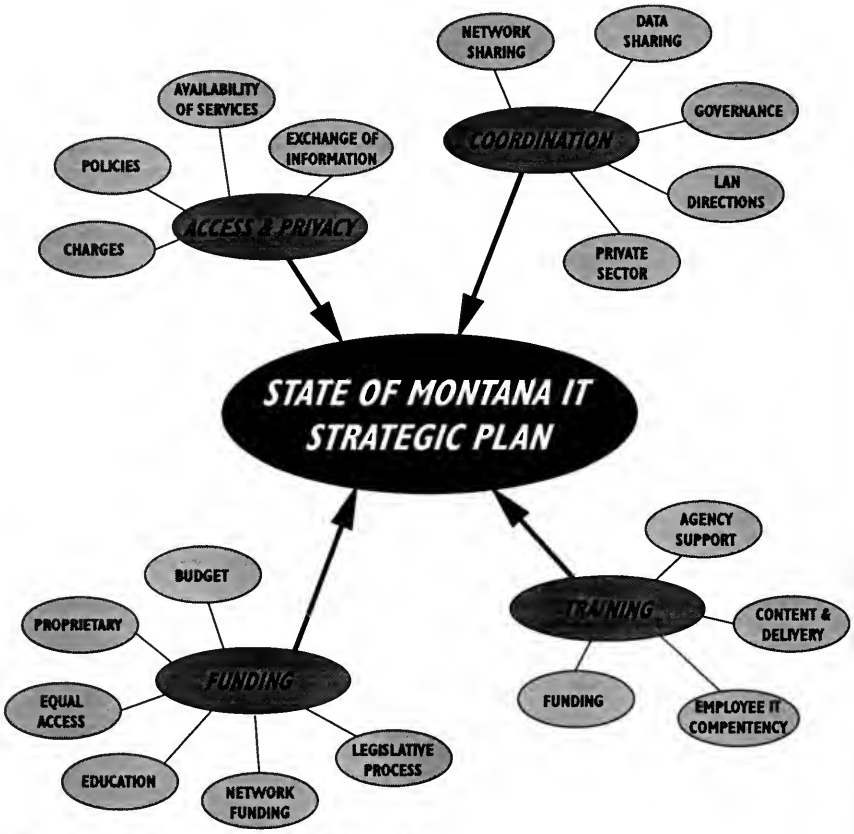


Figure II: ***State of Montana IT Strategic Plan***

Funding

- The state should continue to use the proprietary fund as a primary funding source for IT investment...
- Pursue a coordinated statewide infrastructure for IT development and consistency using pooled resources with ITAC continuing to prioritize, submit, and support statewide IT projects.

- IT capital investments (above current level replacement assets) with high acquisition cost & long-term life expectancy should be initially financed using debt financing or lease purchase agreements.

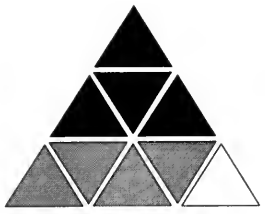
- The criticality of Information Management to the MISSION of state government should be emphasized by ITAC resolution; (1) recommend the formation of a legislative subcommittee responsible for the review of all IT proposals (2) development of a state IT infrastructure plan (3) review significant agency requests for IT (4) development of presentation/analysis standards (5) recommend a one-time system modernization project (6) document successes of previous investments.

Training

- Agency management should recognize and identify the cost of training in an IT acquisition...

- IT competency objectives should be adopted...

- Need to provide a greater variety of curriculum...more computer-based training ...taking advantage of METNET...



TECHNOLOGY SERVING MONTANA CITIZENS

Preface

The fifth component of the Enterprise Foundation is a collection of agency applications which "***highlight***" how information technology is currently being used to serve Montana's citizens.

These agency applications are:

- Montana's Department of Commerce's Superhost Program
- The Department of Family Services Child and Adult Protective Services System (CAPS)
- The Department of Justice's Digitized Driver's Licenses and Fingerprint Identification Applications
- The State Library's Internet Project
- The Department of Revenue's Electronic Tax System
- The Social and Rehabilitation Service's SEARCHS Project
- The State Fund's Benefits Information System

These applications, as well as other state applications not mentioned here, strengthen the Enterprise Foundation because they illustrate to the public how information technology is being utilized in state government to bring about more efficient services.

Department of Commerce:

Information Highway Links Visitor Information Centers Across Montana

The information highway, linking the Montana Department of Commerce's Superhost Program database with four remote visitor information centers, now makes information on Montana's tourism and recreational opportunities instantaneously available via computer to residents and out-of-state visitors.

Photograph by Donnie Sexton

Photograph I: ***The Department of Commerce's Superhost Program provides tourism information to residents and out-of-state visitors.***

The Visitor Information Centers in Culbertson, Dillon, Hardin and West Yellowstone provide detailed information on Montana's lodging facilities, campgrounds, chambers of commerce, car rental agencies, museums, restaurants and churches.

Travel Montana provided each center with a computer, and developed the Superhost tourism and recreational database. The Visitor Information Center systems (VICs) are designed so travelers can stop in and ask questions about lodging, restaurants, and churches in a particular city.

Information is downloaded daily or weekly from Travel Montana in Helena and includes Montana road and weather reports and ski conditions. This year travelers were able to obtain information about fire conditions and recreational areas closed to the public.

Currently there are plans to develop a more comprehensive system distributed throughout the state by way of multimedia kiosk units. As visitor information needs become more sophisticated, the Superhost Program will be available to respond to them.

Department of Family Services:

Child and Adult Protective Services (CAPS) System

Montana, like other states, has historically struggled to achieve comprehensive automation support for the Child and Adult Protective Services (CAPS) programs.

Photograph by Bonnie Sexton

Photograph 2: ***A training session for caseworkers in the Department of Family Service's Child and Adult Protective Services (CAPS) System program.***

The Department of Family Services (DFS) received funding from the 1993 Legislature for a comprehensive case management system and the CAPS project became a reality.

Although CAPS may not reduce the size or complexity of the caseload, its role in improving case management will have a positive effect on factors that influence caseload, and ultimately the services delivered to clients and their families. Through CAPS, less time will be spent on repetitive paperwork and more time on service delivery. Through the automated interfaces with The Economic Assistance Management System (TEAMS) and System for the Enforcement And Recovery of Child Support (SEARCHS), CAPS will automatically send and retrieve data overnight which previously took several days or even weeks of manual forms processing. CAPS will also provide other productivity tools such as word processing and activity scheduling permitting caseworkers to better handle their caseloads and have more time for recipients.

The CAPS project is well underway, on schedule, and within budget. DFS field offices have all been equipped with PC workstations supported via Local Area Networks (LANs) connected to the state's mainframe. Within a span of three years DFS workers will have gone from an environment of virtually no automation to a state-of-the-art system encompassing the latest technologies for use in improving child welfare services to Montana families which make up the caseloads of DFS.

Department of Justice:

Improving Services with Imaging

The Department of Justice believes that the use of imaging technology offers one of the most promising, cost-effective ways to provide better services to the Montana law enforcement community and to the public. The Department has acted on this belief by putting into effect two key programs that serve Montana citizens.

Digitized Driver's Licenses

The Department has implemented an automated driver licensing system that operates at 53 Driver Examination stations across the state. This computerized system will process approximately 650,000 drivers' licenses over a four-year period.

Photograph by Bonnie Sexton

Photograph 3: ***The Department of Justice's automated driver licensing system will produce licenses with computerized digital photos and information stored in magnetic stripes.***

All licenses issued by the new system have a computerized digital photo and signature of the licensed driver. In addition, a magnetic stripe on the back of the license stores -- in electronic form -- the information printed on the front of the license.

The new system is a cost-effective way to provide a modern driver's license that cannot be easily duplicated or altered and that, by placing a hologram of the state seal on the front, also provides increased security against fraudulent licenses. In addition, the computerized photo and signature can be transmitted to law enforcement officials to make positive identifications of

individuals stopped for traffic or other potential violations.

Fingerprint Identification

The Automated Fingerprint Identification System (AFIS) is a six-state cooperative network that captures electronic fingerprint images of individuals and stores them in a multi-state database. The system is used for a number of criminal justice purposes: checking criminal history records, updating records, searching for unidentified persons, attempting to provide positive identification in questionable cases, and matching prints from crime scenes to more than 14 million prints available through the system. AFIS has been instrumental in matching crime scene fingerprints in more than a dozen serious crimes since its inception in Montana in December 1992. As the system matures, it has tremendous potential as a tool for criminal investigations in Montana and, ultimately, for solving crimes that simply can not be solved by relying on searches of manual records alone.

Photograph by Donnie Sexton

Photograph 4: ***The Automated Fingerprint Identification System (AFIS) captures electronic fingerprint images and stores them in a multi-state database.***

Within the next two years, the Department intends to set general imaging standards and to pursue one or more large imaging projects that would enhance its ability to provide cost-effective services to the public and the law enforcement community. Beginning in FY 1995, the department intends to:

- Use image technology to improve access to more than 900,000 driver licensing records that are currently stored in large revolving files which must be retrieved manually in a time-consuming manner.

- Examine the use of imaging technology for storing, indexing and retrieving legal and investigative documents. It is believed that imaging has significant potential in managing the huge volumes of documents that are characteristic of some legal cases in which the

Attorney General's Office defends the State of Montana and for investigation and prosecution of cases involving fraud in Workers Compensation, Medicaid, money laundering, and other areas that have high volumes of documents and evidence.

- Implement state and national upgrades that will enable the Criminal Justice Information Network system to transmit images (such as mug shots and pictures of crime scenes or stolen property) and to relate those images to other information that law enforcement officials may need.

Montana State Library:

Internet for Libraries

Access to the Internet is vital in a state as large, remote, and sparsely populated as Montana, and state's citizens need adequate information access if they are to remain competitive in our rapidly advancing, global society and economy.

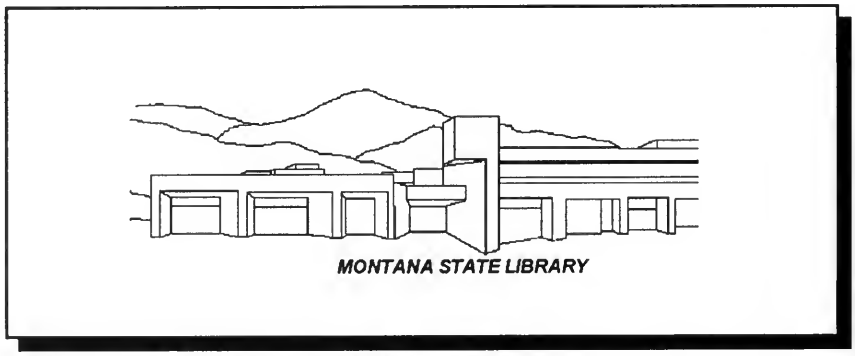


Figure 12: ***Montana State Library Internet Home Page***

The Montana State Library has been working for several years toward providing Internet access to libraries, schools, and hospitals throughout Montana. The State Library, Information Services Division (ISD), Information Technology Advisory Council (ITAC), Montana Telecommunications Advisory Council (MTAC), various libraries, and other organizations have all put effort into attaining this goal. These groups and others realize that as isolated as Montana is from major metropolitan centers, it could still be "at the heart" of information access if the state could provide access to the Internet.

Before Internet access became available through the State's information infrastructure, access was acquired for our staff from two different Internet service providers. As access has become available from the State, we have expanded our services to include library patron access on a limited basis. These efforts will continue and will expand as we approach the goal of statewide access to the Internet for libraries.

In cooperation with ISD and Lewis and Clark Public Library Reference Point project, the agency has installed a terminal server which allows Helena area librarians dial-up access to the Internet. The Reference Point project is also providing training for librarians throughout the state on Internet access.

The Library provides a Mosaic interface, a Windows-based Internet access tool, to its natural resource data and plans to add access to the public access catalog in the next biennium.

Other improvements planned include: a Mosaic interface for all Reference Point kiosks; a Gopher interface; access for library patrons by way of METNET, and access for medical librarians in the Helena area.

The Natural Resource Information System (NRIS), in conjunction with the Montana Interagency GIS Technical Working Group (ITWG), has received a grant from the Federal Geographic Data Committee to facilitate access to GIS data and information about GIS data on the Internet. This project, along with those described above, will help ensure that the State Library, in cooperation with a great number of other agencies both inside and outside of state government, will be in a position to facilitate Internet access for all Montana libraries.

Department of Revenue:

Electronic Tax Systems

Electronic Tax Reporting for Employers

The Montana Department of Revenue is showcasing a new tax filing method for the Fourth Quarter of 1994. Employers filing State Income Tax Withholding and the Old Fund Liability Tax can file and pay electronically.

Filings will occur by way of computer modem. Taxpayers will simply dial the department and transmit the necessary information. While still on-line, they will receive notice of acceptance, or a notice that an error exists. An error code indicates where the problem is and what is wrong. The entire process takes less than one minute.

Payment options for a pilot project include both the Automated Clearing House (ACH) Debit and Credit methods. This is a significant advancement for the department. Until now, the only electronic payment allowed has been Federal Wire Transfers.

Under the ACH Debit Method, the taxpayer authorizes the Department of Revenue to initiate the funds transfer. An additional line in the electronic filing contains the taxpayer's bank account numbers and the amount of withdrawal. The department collects this information in a file which First Bank Helena will access to initiate the transfer.

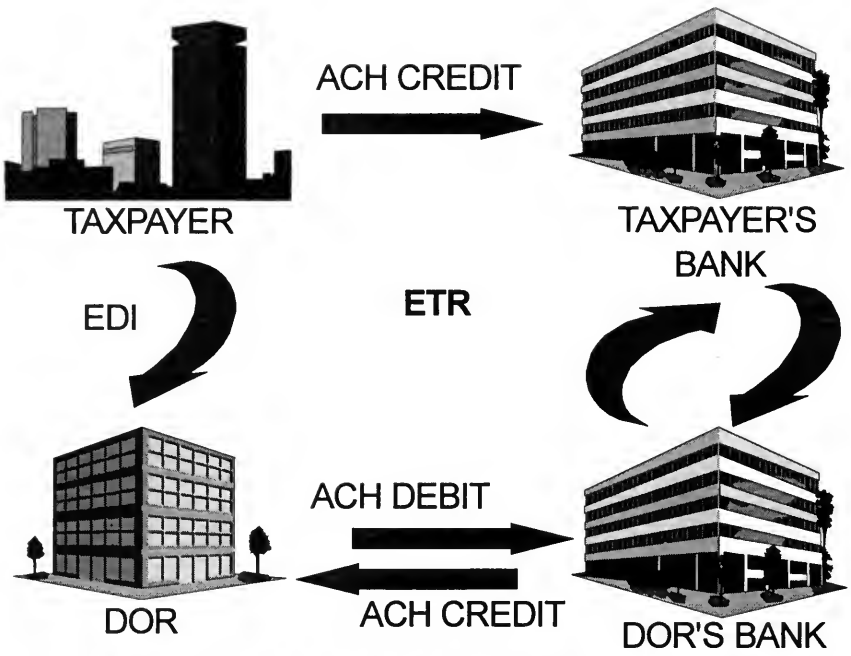


Figure 13: ***Automated Clearing House Debit and Credit Method***

Under the ACH Credit Method, the taxpayer must contact his/her bank and initiate the transfer. First Bank accepts ACH Credits which follow the guidelines set forth by the National Automated Clearing House Association, in a format commonly referred to as CCD+.The benefits to the department are tremendous. Electronic Tax Reporting (ETR) will reduce the strain on current operations. Mailroom, cashiering, data entry, document storage and error correction functions are all but eliminated under ETR. Taxpayers benefit through the reduction of paper and the ease in filing. The two way communication provides instant notification of filing errors, before penalties and interest may accrue. Finally, there is peace of mind in knowing a filing has been accepted by the department.

On a larger scale, everyone benefits when government operates more efficiently and more cost effectively.

Montana/IRS Electronic Filing For Individuals

Starting January 15, 1995, the Montana Department of Revenue will accept electronically filed Income Tax Returns from resident taxpayers in a pilot project with the Internal Revenue Service. Electronic filing is the receiving, processing, archiving and retrieving of tax returns using electronic records.

First, the practitioners enter the taxpayer's Montana income tax return information on a Personal Computer. **Second**, using a telephone line, the tax data is transmitted electronically to the Internal Revenue Service. **Third**, the

tax return information is retrieved by the Department of Revenue from the IRS. **Fourth**, the electronic return is then reformatted and input directly into the Income tax system.

Electronic Filing replaces the following traditional steps which are expensive, labor intensive, and error prone because of the numerous manual processes and human intervention involved:

- Receiving returns, opening envelopes, extracting, and counting,
- Sorting by type of return, numbering and batching
- Manual coding & editing for computer processing
- Data entry
- Correcting certain errors (Error Resolution System)
- Operational controls & tracking

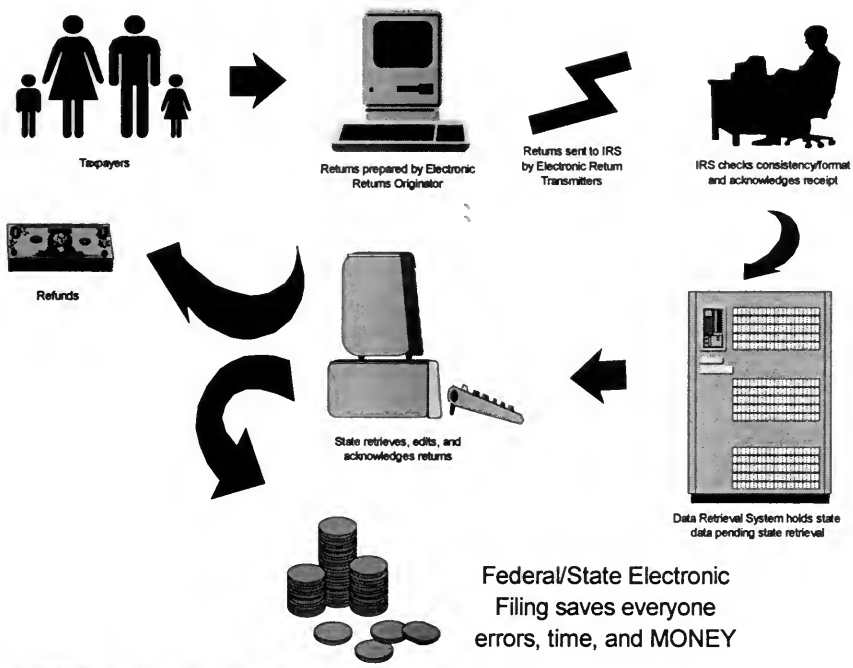


Figure I4: ***Electronic Tax Filing***

Electronic Filing (ELF) automates certain manual processes such as return validation, blocking, and numbering. ELF also has an acknowledgment process that is not included in manual return processing. This process informs the taxpayer that the return has been received by the Department of Revenue (not lost in the mail) and is processable. Because of the low error rate and the ability to view and correct the return on a screen display, less paper is needed. In 1996, the ELF system will be expanded to allow taxpayers to electronically deposit refunds in their bank account.

Department of Social and Rehabilitation Services:

Montana's Child Support System First in the Nation to Receive Federal Certification

Montana received special recognition from the U.S. Department of Health and Human Services Assistant Secretary for Children and Families, Mary Jo Bane, for being the first state to have an automated child support system meeting the requirements of the Family Support Act of 1988. The System for the Enforcement and Recovery of Child Support (SEARCHS), was implemented over a four month period beginning in March, 1993.

Photograph by Carol Smith

Photograph 5: Governor Marc Racicot presents a national award to Mary Ann Wellbank and Mike Billings of the Department of Social and Rehabilitation Services and Ernie DeHoyos and Paul Stewart of BDM Technologies for the SEARCHS project.

SEARCHS automates financial management of child support collections, absent parent location, paternity establishment, case establishment, order modification, case management and internal program management. Financed at 90% federal financial participation, SEARCHS development and implementation cost just under $5,000,000, which is substantially less than what other states have paid for similar systems.

There are 140 caseworkers, attorneys, accountants, and administrative staff in Helena and various regional offices located throughout the state who use SEARCHS on a daily basis to manage 40,000 child support cases. The automated locate features of the system have significantly improved the department's ability to locate non-custodial parents. SEARCHS automatically interfaces with the Federal Parent Locate Service, the Department of Justice, the State Employment Security Administration, the Department of Corrections and Human Services, Credit Bureaus, the Department of Revenue, the Department of Labor and Industry, the State Fund, the Social Security Administration, and the Internal Revenue Service.

SEARCHS also allows transmission and receipt of child support data from state to state through the Child Support Enforcement Network (CSENet) which, when fully implemented nationwide in October 1995, will significantly improve the state's ability to locate non-resident child support obligers and work interstate cases.

Developed and implemented by an independent contractor, SEARCHS is the product of a highly successful, public-private sector partnership.

State Fund:

Launching a "New Era"

The Benefits Information System (BIS) is the first in a series of projects to be implemented at the State Fund over the next few years. The BIS is more than just a technology project, it is a project aimed at redefinition of one of the State Fund's primary business functions; the delivery of indemnity benefits.

Photograph by Donnie Sexton

Photograph 6: The State Fund's Benefits Information System (BIS) project will redefine the way indemnity benefits are delivered through imaging technology.

The State Fund's goal in development of this system includes; maximizing customer satisfaction, maximizing cost containment potential, incorporating best business practices, empowering employees, providing efficient flow of information, streamlining daily activities, eliminating redundant and unnecessary processes, and of course, migrating the business into a more advanced and more flexible technological environment.

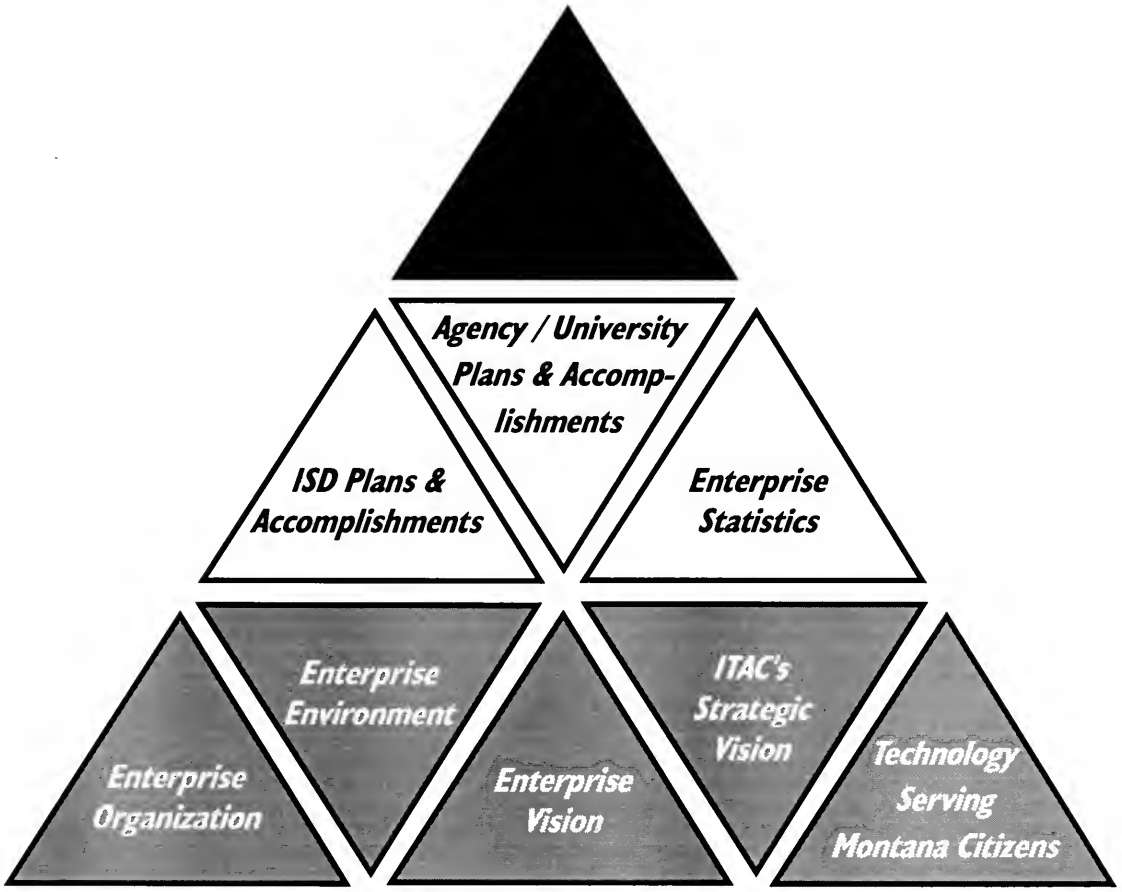
Developed using state standards and guidelines, the system incorporates the philosophies of "right sizing" while offering the flexibilities of client-server functionality. The system is "event-driven" with systems "queues" prompting activities to ensure timely and appropriate claims handling and customer service. The system integrates word-processing capabilities for ease in correspondence, and includes an integrated "expert system" to ensure accurate

case reserving. In addition to all this, the system provides the capability for a paperless office through integrated imaging.

The State Fund announced it was "Launching a New Era" at the beginning of 1994, and the BIS system will play a major role in the realization of this goal.

STATE OF MONTANA

1996-97 Information Technology Plan



Level 2: The Enterprise Utilizing Information Technology

LEVEL 2

ISD PLANS & ACCOMPLISHMENTS

Preface

Presented below are the short- and long-range bureau plans of Information Services Division (ISD). These plans are being implemented in order for this Division to meet its two-fold mission of (1) providing services and assistance to state agencies in accomplishing functions through cost-effective use of information technology and (2) establishing statewide information technology policies and strategic direction.

Computing Operations Bureau

Mainframe Computer Upgrade

Based upon current processor utilization growth projections, the State's central mainframe computer workload will exceed the capacity of the currently installed IBM Model 3090/400J sometime during the second half of fiscal year 1996. The purchase of an IBM ES/9000 Model 740 upgrade to the current processor represents a 50% increase in capacity. In the past, the State's mainframe computer has been upgraded approximately every two years, increasing processor capacity 100%. The current, more conservative projection for this upgrade is the result of two factors:

- The currently-installed processor has a processing speed of 82 MIPS (Millions of Instructions per Second). Doubling this base in one upgrade would result in excess processing power for the State over the expected life of the processor.

- The mainframe utilization growth rate is declining slightly as more computer applications are being developed on client/server and departmental processor platforms.

Mid-tier Technology Study

Clearly, the long-term computing trend in state government is moving toward downsized, mid-tier technologies that will increase flexibility and productivity. Several agencies have already made an investment in this technology (Department of Social and Rehabilitation Services, State Fund, and Department of Labor). ISD is coordinating an ITMG Subcommittee which will set state standards and make recommendations pertaining to mid-tier platforms and technology.

Magnetic Disk Storage Device Replacement

ISD plans to replace the IBM model 3380K Direct Access Storage Devices (DASD) with newer technology IBM model 3390 DASD devices. This will accommodate projected growth requirements for magnetic disk storage for the biennium.

Computer Tape Hardware Upgrade

Tape processing is one of the most labor intensive functions performed in mainframe computer processing. The current tape drive hardware is capable of recording data in a 18-track format in one direction. An upgrade will be installed on this hardware that will allow for bi-directional recording in a 36-track format. This enhancement will double the data capacity of tape media, and will significantly reduce tape storage supplies and floor space requirements.

Telecommunications Operations Bureau

Infrastructure Growth

Local Area Infrastructure Growth. Networking to the central backbone is one of the main communication tools used by agencies to share information with fellow employees and provide services to the general public. As Local Area Network (LAN) requirements continue to grow, ISD will need to expand the existing network infrastructure for additional devices and traffic in order to serve locations currently not connected to the backbone. It is estimated that agencies will add an additional 1200 devices to the network in this next biennium.

Network Switch Upgrades

Maintaining a current level of switching technology has enabled the State to take advantage of services offered by local exchange carriers, long distance providers, and equipment manufacturers. New services have been implemented that have lowered the overall costs of providing voice, video and data services; such as voice mail, inter-active voice response, switched data, and switched video conferencing. Other services being considered are digital switched trunking services, ISDN, and other broadband services as they become available.

Normal Station Growth and Replacement

Agency requests for new telephones or replacement of existing telephone sets continues to grow at a rate of at least 5% per year. The State's telephone systems were purchased over 10 years ago. Many of the original telephone sets need to be replaced. ISD expects to replace nearly 500 telephone sets each year and provide 200 new sets requested by agencies.

Capitol Building/Capitol Complex Rewire

The existing cabling in the capitol, and in many buildings on the capitol complex, is more than 25 years old. The increased need to share information and communicate using personal computers, video and other forms of communication services, requires higher bandwidth and improved wiring performance specifications. Two years ago ISD completed the installation of a fiber optic backbone on the capitol complex to support high speed data between buildings for local area networking. While the outside cabling has been updated, the inside cabling has not been updated in most buildings. Existing cable has been cut, spliced and terminated so many times that it is no longer reliable. Current requests for additional telephones, networking of personal computers, video broadcast, and sound systems requires that the capitol and capitol complex cabling be upgraded.

Interactive Video Expansion

The State has installed two way video equipment in Kalispell, Missoula, Helena, Great Falls, Bozeman, Billings, Miles City, and Butte. Video conferences can be held between any two cities, or all eight cities. A video link can also be established with cities outside Montana via an interstate telecommunications provider. The system is used to deliver educational classes from units of higher education to other locations in Montana, and to provide for state agencies to hold meetings and conduct training, while avoiding high travel costs and lost travel time. The intention is to expand the video system to all units of higher education.

A Multi-Point Control Unit (MCU) is located in Helena and provides this capability. A new MCU will be installed to maximize the use of the interactive video system, as new systems are placed in service. This new MCU will also give the state the capability to interoperate with other video systems in place today, or planned for the near future. For instance, Deaconess Hospital in Billings has a Telemedicine project today, with video systems in place in Eastern Montana. Although their equipment is made by a different manufacturer, the new MCU will allow the two systems to interconnect. It will be important for the state to be positioned for future interaction with these types of programs that will impact the citizens of rural Montana.

Deaconess Hospital in Great Falls has written a grant to install a video system for their Realizing Education and Community Health (REACH) Montana project. Additionally, several of the Independent Telephone Companies have installed or are seeking grants to install video networks in more rural sections of the state. Other state governments and federal agencies have expressed an interest in connecting to the state's video network via dedicated or dial-up access.

Interest has been expressed by other state agencies to participate with ISD in the interactive video network. The Board of Crime Control (Department of Justice) is interested in conducting video arraignment, allowed by state law, to save travel time and alleviate prisoner security issues. The Department of

Corrections has indicated they have a need for video systems at Warm Springs, and other locations.

As an example of projected cost savings to the state, the Department of Health, WIC program was able to save $4,450 in per diem expenses for 87 people attending a recent training session using the video network. This does not include any savings attributable to lost non-productive time while in a travel status. They are able to send more people to training sessions as a result.

Meetings with key officials in Washington D.C. such as our congressman have taken place without the necessity to travel. This saves both out-of-state travel and lost time while in a travel status. This provides the freedom to share information much faster in a face to face environment without all of the expenses.

As additional state sites are added and connections are made to other video networks, the scheduling complexity, site coordination and technical demands will increase. In the last year the usage on the state's video systems has grown from 18 hours per month to approximately over 100 hours per month. The number of sites involved in a conference has grown from an average of 2 to 4 sites per hour of usage. At the present time, one person is dedicated to managing the State's eight site video network. Additional staff have been allocated to provide support for the interactive video system users and network providers.

Novell Support Enhancement

ISD will provide specialized technical support and assistance to state agencies as they administer and manage their Novell NetWare operating systems. Specific duties will include central administration, management of central facilities that secure and provide authorized access, and interaction with the software vendor (Novell) for problem resolution. The Novell licensing agreement will allow agencies a great deal more flexibility in their networks. This flexibility results in additional complexity in the administration of the network and agencies will be requiring expert assistance as they improve their networks and provide greater access within their agencies and to other authorized individuals within state government and the general public.

Policy, Development, & Customer Relations Bureau

SummitNet Issue Teams Established

"Issues" to be considered in planning for and implementing the network expansion (SummitNet) have been identified by ISD and will be researched by SummitNet Issue Teams. These issues are as follows: security issues & methods, management of SNA requirements, distributed product & support, TCP/IP on the mainframe, Internet, educational institutions, funding and cost of service/rate design, non-state access/appropriate use, and deployment strategy.

SummitNet Issue Team recommendations will provide ISD with invaluable insight and "vision" which will help ensure that this major, important statewide project will be successfully employed.

Public Safety Radio Design Proposed

Pending Federal Communications Commission (FCC) rules and regulations portend dramatic change in the radio landscape as it is now known. Estimates show that proposed changes could cost the State and its subdivisions as much as $25,000,000 before all required changes are implemented. Before the turn of the century, further rules and regulations will force a transition to advanced radio technologies.

Today, three large, independent radio networks are operated by the Departments of Justice (MHP), Transportation, and State Lands. Smaller systems are operated by the Departments of Fish, Wildlife & Parks, Institutions, Livestock, and Justice (Investigations and Gambling). Several other agencies seek radio access for employee safety and coordination. Elsewhere around Montana, over a hundred local government systems serve police, sheriff, fire, ambulance, and public works users. They all will be similarly impacted by new FCC regulations and requirements for advanced technologies.

Most land mobile radio users - government and private - are in a quandary over how to respond to these regulatory and technological changes. The Department of Administration has received inquiries from federal, state, local, and private users regarding future plans. Broad interest exists in the potential of a shared radio system, but the potential cannot be gauged without formal planning that involves all the affected parties and system design efforts to accurately estimate costs.

The Department of Administration has created an advisory council comprised of affected State, federal and local government representatives in order to design a system that would meet Montana's needs on the broadest possible scale.

Information Technology Trends Established

ISD's documentation and analysis of internal and external information technology trends provide vision for maximizing the utilization of information technology.

An analysis of trends allows ISD to set statewide information technology direction, and to develop proposals for: upgrading and expanding the state network; meeting the increased user demands for ISD support and services; setting information technology standards, policies, and procedures; being proactive when introducing or implementing new technology into the state; meeting state and federal mandates; and maximizing the state's investment in information technology.

Some of the internal trends to be monitored are:

- migration of applications from the mainframe to a mid-range platform
- outsourcing of system development and computing services
- employment of business process re-engineering strategies
- utilization of electronic commerce (EDI, E-mail, integrated messaging, directory services, external networks, Internet applications, E-forms, application integration, fax conversion to E-mail, electronic funds transfer, file transfer, bulletin board services, etc.)
- move of agencies to the state's Novell and Oracle standard
- demand for access to Internet
- training requirements and training emphasis
- data sharing
- client/server development and implementation
- state business trends (agriculture, tourism, timber/wood products, community development, mining/energy, etc.) and economy
- state economic development

- ability to hire qualified information technology professionals and knowledge workers
- performance measurement (benchmarking, etc.)
- utilization of emerging technologies

Some of the external trends to be monitored are:

- vendor reliability and prominence in the market place
- computing platform evolution
- telecommunications and network emergence or growth (nation wide)
- legislator's and public's perception of the importance of and need for information technology in state government
- direction of national information infrastructure
- direction of Internet (for commercial-use purposes)
- computer, peripheral, and networking pricing
- federal information technology standards and regulations
- industry/business utilization of information technology
- utilization of information technology by other states

Information on these trends (as well as an understanding of the executive's, agencies', Advisory Groups', and ISD's mission and goals--and the legislature's support) will bring about timely and appropriate statewide direction for the utilization of information technology in the State of Montana.

Disaster Recovery Plan Updated

It is critical that an enterprise protects its information technology assets and resources from accidents (such as fire), natural events (earthquakes), deliberate disruption (viruses), hardware failure, employee caused incidents (improper data backup), and other circumstances which may interrupt normal operations.

Currently ISD is updating its Disaster Recovery Plan which includes comprehensive information related to: recovery teams, recovery plans (manager's plan, business continuation plan, salvage team plan, hot-site plan, relocation plan, transition plan) and documentation of networks, applications, cabling, and inventories.

In 1995 ISD will work with agencies in developing or bringing up to date their disaster recovery plans. As agency disaster recovery plans are completed, they will be added to the Enterprise Disaster Recovery Plan.

Systems Support Bureau

Database System Support Plan

Standard database software (ORACLE) and network operating system software (Novell NetWare 4.X) were selected and site licenses were acquired in FY94 and FY95 as a result of a thorough interagency evaluation and selection process involving the Information Technology Managers Group (ITMG) and the Information Technology Advisory Council (ITAC). Agencies are relying heavily on these products to improve their productivity and provide service. As agencies evolve to more sophisticated use of computers for more of their work, the software requires more advanced, specialized technical support for management, training, problem solving, design, and use.

Systems Support Bureau staff will provide specialized technical knowledge to state agency management and programming personnel for all aspects of database systems. Specific duties will include central administration of database software licenses and interaction with the software vendor for problem resolution; assistance to agency personnel with the establishment of standards to support Oracle data constructs and facilitate agency data sharing; support to agency personnel in the installation, maintenance, problem determination, performance monitoring and use of the software; and agency assistance in the development of database and application design, particularly to solve difficult problems and facilitate access among agencies. Three agencies (State Fund, Commerce, and Department of Labor's Employment Relations Division) are currently developing major systems using this software and will require this support for systems going into production on or before July 1995.

A small, centralized professional staff of software specialists with expertise conserves personal services (FTE), management, and training budgets statewide as many agencies benefit from this expertise.

- Provide desktop data and office automation support for state agencies including:

  1) Provide support, set direction, and guide training curriculum development for databases, spreadsheets, statistics, graphics, utilities, word processing, electronic mail and calendaring.

2) Implement and support the statewide enterprise electronic mail system.

3) Support and operate the State Bulletin Board System (BBS).

4) Enhance the BBS to include additional capabilities such as integration with the state e-mail system and indexing. March 1995.

- Develop direction for the following:

  1) End user desktop database development including state agencies' use of Oracle/Powerbuilder, end user Windows databases, and ties to legacy RBase/dBASE type applications.

  2) Use of 900 numbers for public access systems.

  3) Future e-mail standard in SummitNet and TCP/IP environment.

- Provide project management and direction for implementation and support of the division LAN.

- Implement CD-ROM services on the backbone such as MCA, Computer Library, vendor support CD's, etc.

- Manage the provision of professional systems support services for state agencies, providing project management, consultation, development, and ongoing support for the following agencies/systems:

  1) Department of Administration: Public Employees' Retirement System (PERS); Payroll/Personnel/Position Control System; miscellaneous ISD administrative systems; Statewide Budget and Accounting System (SBAS); Property Accountability System (PAMS)

  2) Fish, Wildlife, & Parks: Budget Allocation System (BAS)

  3) Secretary of State's Office: Uniform Commercial Code (UCC) System and Corporations System

  4) State Auditor's Office: Warrant Writing System

  5) Department of State Lands: State Trust Land Management System

  6) Commissioner of Higher Education: Regents Employees' Retirement System (RERS)

- Manage the provision of professional systems development services for state agencies, providing highly qualified, skilled project management, consultation, analysis and design, and development services.

- Complete planning for the Secretary of State's reengineering project.

- Develop a Contract Management System for ISD.

- Develop and maintain a highly qualified, experienced, professional staff capable of performing:

  1) "Outsourcing" internal to state government.

  2) In both the existing legacy environment and new client/server technology.

  3) Services using proprietary funding, fully recovering the cost of the services provided.

ISD Accomplishments

- Reorganized to be more customer focused--with improved service, and improved planning and development.

- Upgraded mainframe computer from 3090/400E to 3090/400J.

- Migrated Department of Justice applications from Armory site to Mitchell site.

- Conducted increasingly comprehensive mainframe and network disaster recovery testing using the disaster recovery facility.

- Participated with agencies in a multitude of consensus building efforts to define strategic and tactical direction for information technology projects (database directions, NetWare management, mail automation, product and service acquisition).

- Implemented a mail address certification process that may be used by all agencies in conjunction with automated mail processing in General Services Division.

- Implemented project management software to help manage and monitor staff resource allocation on development projects.

- Embarked on major effort to develop client/server expertise in support and development areas.

- Provided increased service as measured by telephone calls, interactive video, storage, cpu cycles, and number of network attached devices without staff increases.
- Developed end user support for Windows based versions of all standard office and desktop software.
- Increased the number of e-mail users from approximately 850 to approximately 3,000 and implemented a Windows version with calendaring.
- Completed major systems development projects for the Secretary of State; Fish, Wildlife, & Parks; Public Employees' Retirement Division; and Accounting Division.
- Implemented a new, improved Bulletin Board System (BBS) as mandated by changes in legislation by the last legislature.

ISD User Groups Established

ISD has established several user groups to support agencies and the enterprise. These groups are described below:

NetWare Managers Group: The Information Technology Advisory Council (ITAC) and the Information Technology Managers Group (ITMG) passed resolutions in 1994 endorsing NetWare 4.x as the statewide "enterprise" network operating system. NetWare 4.x represents a significant shift towards managing statewide network resources. In order to coordinate the use of these resources and obtain agency input on various NetWare issues, the NetWare Managers Group was formed.

The NetWare Managers Group is a technical working group of ISD and state agency network administrators. It meets regularly to define needs, coordinate changes to the statewide Novell network, and provide input to ISD regarding all NetWare issues. Attendance at NetWare Managers Group meetings is mandatory for all agencies participating in the NetWare 4.x implementation, and recommended for those currently using other versions of NetWare. The importance of discussing potential effects on agencies and coordinating changes to the network, is critical to consistent NetWare 4.x implementation.

Oracle Users Group: With the adoption of Oracle as the state standard for relational database management systems, came the formation of the Montana Oracle/Powerbuilder Users Group (MOPUG). It is the intent of the MOPUG to sponsor Oracle and/or Powerbuilder seminars for the community and will help users by encouraging them to share their knowledge and promote better understanding of Oracle/Powerbuilder capabilities. More information about MOPUG can be obtained through the Systems Support Bureau of Information Services Division.

ISD Services Evaluated

ISD realizes that it's current environment must be evaluated in order to guarantee that the public and agencies are receiving appropriate and cost-efficient services, and that the state is positioning itself correctly for handling increased user demands for services and computing power. Therefore, in 1993 ISD obtained the services of Real Decisions Corporation to evaluate ISD's Data Center.

The results of this study are given below:

Real Decisions Corporation's analysis indicate that the State of Montana is delivering services to its data center customer base at lower-than-average unit costs. This conclusion is based on overall measure of cost-efficiency as compared to the average efficiency found in installations that are part of the Real Decisions-sponsored Decisions Support Center (DSC) association. The State of Montana supplies services at unit costs that are 9% less than those offered by the typical DSC member.

Real Decisions' measurement of overall cost-efficiency is determined using the NOW (NOrmalized Weighted) Index: Normalized based on a consensus categorization of cost expenditures and weighted by the amount of customer work delivered. This is a relative rating that compares the State of Montana's cost to produce its customer workload versus the typical DSC member. As shown below, the State of Montana's NOW Index is 0.92.

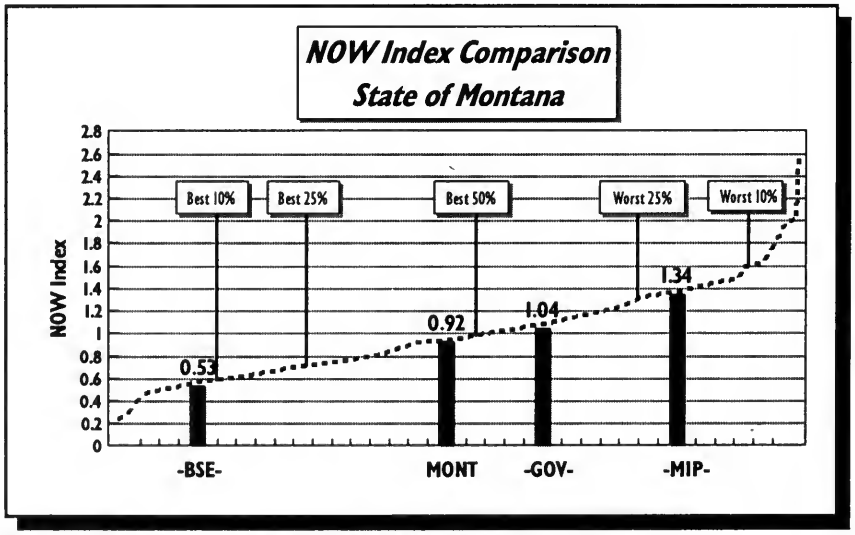


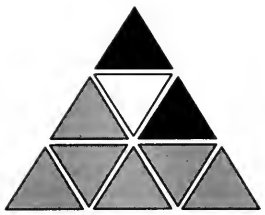
Chart I: ***NOW Index Comparison - State of Montana***

The State of Montana has done an excellent job of managing the cost of the data center in terms of hardware, software, and number of people. With further automation and additional workload balancing, it is clear that the State is well-positioned for performance improvements. The challenge for the

State of Montana is to continue to provide quality service to its growing on-line customer base while holding unit costs to a minimum.

From Real Decisions Corporation
Decision Support Center
Data Center Performance Analysis
1993

ISD is proud of this Data Center performance rating and of the ISD staff who have achieved this success. ISD will continue to evaluate and measure the performance of its services to the public and agencies.



AGENCY / UNIVERSITY PLANS & ACCOMPLISHMENTS

Preface

Montana has 27 agencies and the university system which utilizes information technology for streamlining internal processes and for providing efficient, cost-effective, and appropriate public services and educational opportunities. This Section of Level 2 (Enterprise Utilizing Information Technology) defines the agencies and universities short- and long-range information technology plans and information technology accomplishments.

While each agency is responsible for establishing its own information technology goals, objectives, and plans; agencies work with ISD when procuring hardware, software, and private sector services in order to ensure network and statewide plan conformance.

The universities are also responsible for establishing their own information technology plans, however, they work autonomously when procuring hardware, software and private sector services.

Agency plans have been consolidated by ISD (see Level 3) in order to determine the direction the state is taking as a whole concerning the current and future utilization of information technology. This consolidation of plans also provides the legislature, the Information Technology Advisory Council (ITAC), and the Information Technology Manager's Group (ITMG) with invaluable background information for reviewing statewide information and data processing policies, making recommendations regarding the utilization of information processing technology in state government, and advising the Department of Administration on long-term strategic planning.

DEPARTMENT OF ADMINISTRATION

Description

The Department of Administration provides centralized services for state agencies in the following areas: accounting and financial reporting; capitol complex building maintenance and capitol security; state bonded indebtedness administration; state treasury services; state payroll services; insurance coverage and Tort Claims Act administration; systems development, telecommunications, and data processing; personnel management and labor relations; purchasing and surplus property administration; and duplicating, mail, and messenger services. The department also administers the state Long Rand Building Program, state employee group benefits program, and the various state retirement systems. In addition, the Board of Examiners, State Tax Appeal Board, State Compensation Mutual Insurance Fund, Public Employees' Retirement Board, and Teachers' Retirement Board are attached to the department for administrative purposes only.

Note: The State Compensation Insurance Fund's Plans and Accomplishments are described later in this section.

FY96-97: Planned Projects, Initiatives and Goals

- Develop an on-line process to allow agencies to enter Property Accountability Management System (PAMS) documents through On-line Edit and Entry (OEE). This will reduce keypunch costs for the bureau, and time and postage for the agencies.
- Put the "Montana Operations Manual Vol. II" and the "Information Control Core Index" on-line so agencies can access and retrieve accounting policy and ICC information electronically. This will allow the bureau to provide changes to accounting policies on a more timely basis and at reduced printing costs.
- Automate the reconciliation to SBAS (Statewide Budgeting and Accounting System) of bank statements from the main clearing account in Helena and approximately 100 outlying banks. This process is currently done manually; automating it would improve accuracy and increase efficiency.
- Use desktop publishing technology to facilitate the making of forms, reports, etc. Will hopefully be used in the future to produce the Long Range Building Program Book.

- Improve the position control portion of the Payroll/Personnel/Position Control (PPP) system and ongoing enhancement to the payroll portion of PPP. The division also plans to begin the evaluation of the "useful life" of PPP and whether and when replacement might be appropriate.

- Place frequently used data, reports and formats on the local area network; and plan for continued movement away from paper format for work products and distribution of information to agencies.

- Examine ways of providing interactive training curricula via personal computer or network--perhaps using conferencing software.

- Encourage agencies to file public retirement system information electronically vs. paper reporting.

- Purchase a portable PC to allow staff to provide current files and retirement estimates for those in attendance at presentations and seminars throughout the state.

- Continue to upgrade hardware throughout the department and move to Windows operating system software.

FY98-99: Future Projects, Initiatives and Goals

- Continue automation of the accounting process either in how agencies provide data or how data can be provided to agencies. This will include increased utilization of PC's to access the mainframe database (SBAS, PAMS, etc.).

- Upgrade equipment and software as technology and departmental requirements change.

- Study potential replacement or redesign of all or part of the central payroll system and explore the use of imaging for production and storage of personnel documents and records.

- Continue to upgrade departmental hardware and software and continue to expand the use of electronic transmission of information.

- Convert all hardcopy, microfiche and microfilm files and reports for the Teachers' Retirement System to electronic media storage. Presently, the process to reconstruct the service, retirement payment, withholding, and benefit history of an individual's record requires a search of all the above listed media. The typical twelve year history search, to the completion of the written report, requires over 300 personnel hours. Conversion to electronic media (CD ROM) will allow retrieval, processing, and report generation within minutes.

Accomplishments

- Completed the development and implementation of a new automated system for the Public Employees' Retirement Division. The new system replaces a 20 year old tape file based system with a system having online functionality and using database technology. It supports all active membership functions including the ability to calculate and track the purchase of additional service. It also provides more information for actuarial analysis. The new system allowed PERD to decrease FTEs.

- Developed and implemented the on-line entry of Information Control Core (ICC) Forms 191 and 192 by agencies. All keypunching of ICC forms was totally eliminated, reducing keypunching costs by approximately $7,000 annually.

- Consolidated the number of local area networks supported by the Data Processing Unit of the Accounting and Management Support Division from seven to three.

- Developed a file management system to track all Architecture/Engineering projects. This includes project information such as contract dates, bid dates, award dates, notice to proceed dates, completion and warranty dates. This information is accessible to all staff members for quick reference as to the status of a project.

- Purchased, developed and implemented the State Insurance System to maintain eligibility and premium information on all insureds under the state benefit plan. System will allow on-line enrollment by agency payroll clerks, and will provide information for payroll premium deductions and claims processing.

- Automated and consolidated employee profile data reports. The division now uses a single extraction of data from PPP into a PC database to provide regularly accessed information to network users.

- Eliminated storage of paper position information and now accepts position descriptions and other documents in electronic form. All position analysis is done via the network with analysis and results stored electronically.

- Eliminated the mailing of hard copy draft rules, rule notices, policy statements, and other notices to agency personnel officers and directors. Copies of documents are sent via electronic mail.

- Developed and implemented automated print job and photocopy billing, purchasing, and accounts receivable in the Procurement and Printing Division.

- Completed installation of a customized "Fourth Generation Language" benefits software applications package on a MicroVax 3100 model 90 platform. This system is saving Teachers' Retirement many personnel hours (including the reduction of .5 FTE), decreasing operational computer expenditures by 50%, and helping to decrease response time when responding to member requests for information.

- Upgraded hardware and networks in several divisions, notably: General Services Division, Architecture/Engineering Division, Procurement and Printing Division, Risk Management and Tort Defense Division, and State Tax Appeal Board.

DEPARTMENT OF AGRICULTURE

Description

Department of Agriculture, established by the Montana Constitution, Article XII, Section 1, promotes the agricultural industry and enforces agricultural laws which protect farmers and consumers. The principal functions of the department include: agricultural marketing; wheat and barley research and market development; maintenance of comprehensive agricultural statistics; operation of specialized rural development programs which provide assistance to qualified rural families; administer Growth Through Agriculture loan and grant programs; administration of state crop hail insurance; enforcement of grain laws; grain inspection and grading; regulation of commercial feeds and fertilizers; monitor medicated feeds; provision of horticultural inspection and quarantine services; pesticide regulation and enforcement; agricultural chemical and ground water protection; operation of technical and field-oriented pesticide service programs; enforcement of apiary laws; and management of noxious weed control.

FY96-97: Planned Projects, Initiatives and Goals

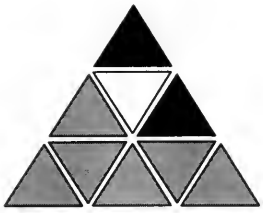
- Convert Novell LANs to Novell NetWare 4.X.
- Connect all departmental LANs to the Helena office.
- Upgrade the computer hardware in all field offices.

FY98-99: Future Projects, Initiatives and Goals

- Begin using client/server computing for on-line field office communication with the Helena office.

Accomplishments

- Completed the conversion of two LANs to Novell NetWare 3.11.
- Upgraded about 15% of the computer hardware to current state hardware standards.



OFFICE OF THE STATE AUDITOR

Description

The State Auditor supervises the fiscal operations of the state and recommends fiscal management practices. The auditor acts as the Commissioner of Insurance and the Securities Commissioner. The auditor collects insurance tax premiums; and licenses insurance agents, securities salesmen, broker-dealers, and investment advisers.

FY96-97: Planned Projects, Initiatives and Goals

- Implement CD-ROM Jukebox on network.
- Convert old system applications to FOXPRO.
- Investigate Implementing Oracle.

Accomplishments

- Migrated to Novell NetWare 4.X.
- Installed and implemented NetWare Connection modem pool.
- Converted current system applications to FOXPRO.
- Implemented Windows operating system.

DEPARTMENT OF COMMERCE

Description

The Department of Commerce encourages and promotes business activities in Montana including: providing assistance to businesses wishing to develop or expand; marketing Montana as a vacation destination and motion picture site; providing means of bringing commercial products to local, national and international markets; providing financial and technical assistance to counties and communities; regulating financial institutions; building code regulations; professional and occupational licensing. The Department includes the Science and Technology Alliance, Board of Investments, Board of Housing, Montana Health Facilities Authority, and Lottery Division.

FY96-97: Planned Projects, Initiatives and Goals

- Convert remainder of the department to a LAN, including the Science and Technology Alliance, Building Codes Bureau, Montana Lottery, Travel Promotion's data entry system at the State Prison, and others.

- Convert to client/server ORACLE database by replacing nine-year old AT&T Minicomputer running Informix database. All Informix programs will be converted to ORACLE, the new state standard database, when the AT&T's replacement is installed. This is projected to take the full biennium and contracted programming services will be used for the bulk of the conversion.

  A significant difference between the old system and the new is that all databases will reside on a single database server (4 AT&T's were used at three locations in the past). This will require new communications technology (routers or frame relay have been suggested by ISD) to accommodate the traffic.

FY98-99: Future Projects, Initiatives and Goals

- Complete Informix to Oracle conversion.

Accomplishments

- Converted the main building to a LAN.
- Established the use of bar coding in the Professional and Occupational Licensing Bureau for license renewals.
- Installed Travel Promotion information stations in Culbertson, Dillon, Hardin and West Yellowstone.

MONTANA CONSUMER COUNSEL

Description

The Montana Consumer Counsel (a legislative agency created by the 1972 Montana Constitution) represents the utility and transportation consuming public of the state in hearings before the public service commission of any other successor agency, and before state and federal courts and administrative agencies.

Accomplishments

- Connected to the state network during FY95.

DEPT. OF CORRECTIONS AND HUMAN SERVICES

Description

The Department of Corrections and Human Services provides a variety of services including adult corrections, mental health, and chemical dependency programs. The department's duties include program management, evaluation, statewide coordination, and provision of services. The department is responsible for the approval and certification of some programs; providing training and education for service providers, and collecting reimbursements owed to the state for the cost of institutionalized care. The department manages Montana State Prison, Women's Correctional Center, Swan River Correctional Training Center, Montana State Hospital, Center for the Aged, Montana Developmental Center, Eastmont Human Services Center and Montana Veteran's Home. It also manages a wide variety of community-based corrections and human service programs in Montana.

FY96-97: Planned Projects, Initiatives and Goals

- Build on the foundation that is being laid this biennium. The new DCHS Wide Area Network will proceed with the SummitNet Project providing the underlying architecture to enable the gradual introduction of Oracle client/server technology. This will provide the opportunity to re-engineer and potentially redeploy RPG applications currently residing on the Department's IBM AS/400 computer, reducing future needs to upgrade that processor and its peripherals, and facilitating data sharing with other state agencies such as the Department of Justice.

- Conduct a review of a major AS/400 system, the Adult Correctional Information System (ACIS). A review team has been appointed and is currently looking at ways to improve ACIS to respond to changing customer needs, statutory and regulatory requirements, and the evolution of the correctional system to a more "community based" system as mandated by legislative action.

- Emphasize the development or acquisition of mainstream institutional systems. For example, several of our institutions have identified the need to automate the patient care planning and management, patient assessment, physician's orders, patient review scheduling, and daily census processes. A specific project planned is the Mental Health Data Enhancement Project. This project, funded under a federal grant, will bring our mental health systems up to minimum federal standards for mental health data sets, and will

create a Management Information System for the Montana State Hospital at Warm Springs.

- Evaluate the potential benefits of using interactive video (METNET) as a method to bring continuing education to staff and clients in our institutions This will assist in reducing costs related to maintaining (or obtaining) accreditation. If the data indicates that the use of this technology is plausible and cost-effective, a project to implement may be undertaken during this biennium.

- Develop and conduct skill training for staff to help ensure that we make maximum use of the technologies in place.

FY98-99: Future Projects, Initiatives and Goals

- Consider conversion from RPG to Oracle as legacy systems require major enhancements and/or rewrites.

- Expand the wide area network as more and more of the Department's routine business functions are automated. Likewise, the need for staff training will continue to be important.

- Continue the planning process for each biennium to continue to leverage benefits from IT investments, and to facilitate data sharing with other state entities as needed and appropriate.

Accomplishments

- Linked Local Area Networks in all institutions except the Montana Development Center (MDC) at Boulder. MDC will join this Wide Area Network at the conclusion of the current campus consolidation project in 1996. The project has already provided enhanced communications capabilities through E-Mail between staff in the institutions and in the Central Office. It has significantly enhanced system performance by incorporating data lines which operate nearly 6 times faster than before. Some 300 new PCs have been installed to replace equipment which was obsolete to the point of being unusable in many cases.

- Upgraded the AS/400 mid-range computer this biennium. This upgrade triples the power and capacity of the AS/400, and has provided significant performance improvements as well as room for future growth of systems. The AS/400 was also installed as a node on the Department's Central Office LAN.

- Implemented a computer-based Job Training Program for Offenders. This program has been put in place at the Montana State Prison, the Women's Correctional Center, various Pre-Release Centers, and Probation and Parole offices throughout the state. It provides training to assist offenders with obtaining their GED. It also includes modules on job search skills and life skills.

- Put in place a system for the electronic transfer of MA-5 Medicaid drug records between the Department and Consultec, the fiscal intermediary for Medicaid Montana. The process replaces a manual system and greatly speeds up the process of obtaining reimbursement for costs incurred by the Department on behalf of Medicaid-eligible clients in the various institutions.

- Connected all state licensed chemical dependency centers to the Alcohol and Drug Information System (ADIS) on the Department's AS/400. This allows the electronic submission of admission, discharge and follow-up treatment data, and replaces a manual system. This also enables the sharing of data among the centers. Unique client identifiers ensure full confidentiality. The capability opens the door for further electronic data sharing between and among the centers and the Department.

DEPARTMENT OF FAMILY SERVICES

Description

The Department of Family Services provides protective services to children and adults who are abused, neglected, or exploited. The department helps troubled families through services that aim to stop child abuse, preserve family life, and educate the public about child abuse and neglect. The department operates Pine Hills School for Boys and Mountain View School for Girls which provide residential and correctional services for youth ages ten to nineteen. In addition, DFS is responsible for: the aftercare program which provides community supervision for youths released from correctional facilities; arranging adoptions (typically for older children, sibling groups and children who have special needs); and providing supportive services that enable senior citizens to maintain their independence.

FY96-97: Planned Projects, Initiatives and Goals

- Complete development phase of CAPS (Child and Adult Protective Services) by implementating the CAPS system in March of 1996. CAPS will operate on the state's mainframe with over 600 DFS users located in Helena and 45 county field offices. The statewide (SNA/SDLC) communication network will provide online access. In addition to using the standard ADSO/IDMS software protocols, CAPS will use a unique blend of mainframe, Windows, and WordPerfect features to support the comprehensive text document requirements envisioned by the project user team.

- Operate CAPS under the control of a Facilities Management (FM) contract currently being negotiated by DFS and BDM management. The FM contract will be fairly inclusive for all operation and support responsibilities; such as system maintenance and operation.

FY98-99: Future Projects, Initiatives and Goals

- Continue operation of CAPS. No new major projects or initiatives are foreseen for DFS at this time. However, there exists a great deal of interest in pursuing the possibility of upgrading CAPS to GUI screens using the PC-based technology already installed in the field as a foundation for development.

Accomplishments

- Realized the goals of a planning process that began immediately following the 1993 Legislature. The Child and Adult Protective Services (CAPS) system project team was formed and the initial task of procuring the services of a contractor for the development and installation of this large MIS database system was planned.

- Defined CAPS system requirements and produced the CAPS RFP in September, 1993. A contract was negotiated with ISD to utilize BDM under their MIS contract, and project tasks began in October, 1993.

- Installed local area networks in all county field offices. Currently, there is no automation in these offices. This is being accomplished as a collaborative effort involving both DFS and ISD technical staff, and the training of over 400 new system users. Although this project is scheduled for completion well before the start of the FY96-97 biennium, these LANs will be a critical part of the CAPS operational infrastructure, and will be supported by DFS technical staff.

DEPARTMENT OF FISH, WILDLIFE AND PARKS

Description

The Department of Fish, Wildlife and Parks conserves and manages wildlife and administers parks and recreational areas for the benefit of Montanans and visitors to the state. The department strives to create optimum outdoor recreational opportunities, with emphasis placed on wildlife and on natural and cultural resources which have aesthetic, scenic, historical or archaeological significance. Functions of the department include issuing fishing, hunting, trapping and related licenses; enforcing laws and regulations relating to fish wildlife and parks; acquiring, developing and maintaining wildlife management areas, state parks and recreational areas; and managing and enhancing wildlife populations.

FY96-97: Planned Projects, Initiatives and Goals

- Examine the possible usage of touch screen kiosks at several sites around the state (joint project with the state Department of Commerce). These kiosks will provide information related to state parks, fishing access sites, and recreational opportunities in Montana. Possible future uses might include issuance of non-resident fishing licenses, state park passports, camping permits, and specific and localized information related to fishing.
- Capture data to provide harvest information related to migratory birds as part of a federally mandated program. The information may be used to help obtain federal funding to manage the habitat used by these migratory fowl. Species included are geese, ducks, swans (web-footed waterfowl), doves, snipe, cranes, coots, and rail (other waterfowl).

FY98-99: Future Projects, Initiatives and Goals

- Examine point-of-sale licensing. This would be an on-line issuance process that would allow for the immediate capture and use of licensing data. Benefits would include "One-Stop Shopping", edits to allow clean data to be captured, immediate access for enforcement personnel, immediate identification of individuals with restricted or suspended privileges, and electronic transferral of licensing revenues.

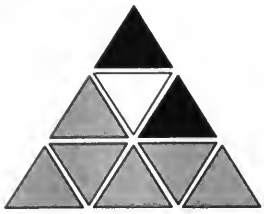
Accomplish-ments

- Functionally separated the special licensing process. This allowed drawings for moose, sheep and goat to be held 60 days earlier than in previous years--providing a successful recipient with more time for scouting and planning their hunt.

- Completed the networking of all regional officers and headquarters with Novell networks. This allowed ZIP!Mail and office automation agency-wide.

- Converted harvest survey information to a PC-based structure to allow for easier and more efficient public access.

- Designed and implemented the BAS (Budget Allocation System). This system allows FWP to more efficiently plan, monitor and allocate budgets and related information within the agency--making for a more responsible governmental organization.



GOVERNOR'S OFFICE

Description

The executive power is vested in the Governor who insures that all state laws are faithfully executed. Offices directly attached to the Governor's Office include Citizen's Advocate and Budget and Program Planning.

FY96-97: Planned Projects, Initiatives and Goals

- Continue to automate State budget processes such as the Executive Budget, Legislative Appropriation, and Revenue Estimate systems. These systems are used by the Office of Budget and Program Planning (OBPP) for developing the executive budget and for controlling SBAS. (New automation will use the State's Novell and Oracle site licenses.) Eventually all state agencies will be able to create and update operating plans and to electronically submit updates to revenue estimates and appropriations.
- Upgrade existing computer equipment on a five-year cycle.
- Develop or purchase an automated system for tracking correspondence, phone communications, issues, and citizen concerns.

FY98-99: Future Projects, Initiatives and Goals

- Continue automation of systems related to budget development and implementation.

Accomplishments

- Completed a joint project with the Legislative Council and the Department of Administration to allow all network users on the Capitol Complex Backbone (the computer network for all the buildings near the Capitol) direct access to a computer version of Montana Code Annotated (MCA).
- Upgraded the capacity of the network file server so that all agencies can directly access the Executive Budget System within OBPP. Only file transfer has been implemented.
- Implemented a new system in the Lieutenant Governor's Office for tracking appointments to boards and commissions.

DEPT. OF HEALTH AND ENVIRONMENTAL SCIENCES

Description

The Department of Health and Environmental Sciences protects and promotes the health of citizens of the state, and provides health care services throughout the state including: air, water quality control, solid and hazardous waste, and environmental remediation; environmental protection programs; maternal and child health services; dental health; disease control; nutrition; health education and planning; hospital and medical facilities; laboratories; records and statistics; and local health services.

FY96-97: Planned Projects, Initiatives and Goals

- Participate in a pilot project with the Centers for Disease Control (CDC) to collect immunization data on children two years old or younger. This project will involve the development of a system to gather data from various sources in Montana including: county health offices, hospitals, and other health care providers. The pilot project's goal is to determine the most cost-effective manner of collecting this data and to establish an operating system within a selected portion of the entire field of sources. If the pilot is successful and the CDC provides continued funding, the system will expand to accomplish the complete project. The pilot project is scheduled to be fully operational by January 1, 1996.

- Embark on a project in the Health Services area to coordinate system development projects so that more effective use of grant monies and human resources can be realized. This effort should be able to take advantage of the state's new client/server database standard.

- Move the Food and Consumer Safety Bureau's Establishment Licensure System from the mainframe to the Local Area Network. It is anticipated that this project will be completed by FY97.

- Implement APATS (Automated Payroll and Time-keeping System) during FY95 and FY96.

- Implement an on-line requisition system in the Central Services Division. The goal is to have the system completely operational by the beginning of FY97.

FY98-99: Future Projects, Initiatives and Goals

- Convert the Department's network system to a graphical user interface (GUI) (such as Windows) if support staff levels are at a level which will allow for the additional workload. It is estimated that conversion and continued support of the GUI will be the equivalent of 1.00 FTE.

Accomplishments

- Implemented Remote Dial-in Access (RDA) services for the Department. The initial uses include transfer of data files and e-mail services for remote locations of the department, telecomputing, and remote support of the department's Wide Area and Local Area Networks.

- Implemented a new system for the Women, Infants and Children (WIC) program. Through grants received from the U.S. Department of Agriculture the WIC system, which was originally a computer mainframe system, has been converted to a LAN/WAN system. The project was initiated to update the current system and to accommodate needed changes to ensure security, fraud protection, legislative audit concerns, and enhanced system performance. A contract(approximately $1.0 million) for the systems development and programming of the system was awarded to Arthur Andersen Consulting. The Information Services Bureau was instrumental in the design, configuration, installation and implementation of the LANs, stand-alone personal computers, and laptops used in the system. There are currently 14 LANs, ten stand-alone PCs and 18 laptop computers used in the system. The system incorporates dial-in access to the remote LANs for the purpose of uploads and downloads of data, support, and maintenance of the file servers.

- Implemented a fully automated cash receipt system (CRAR System) that allows for the intake and processing of cash receipts, including the transfer of all appropriate SBAS transactions via remote job entry (RJE). The cash receipt system is integrated with several DHES bureaus that produce the highest volume of invoices. When appropriate, receivables are automatically created when invoicing occurs. The invoicing bureau's systems are automatically updated when payments are received, eliminating or greatly reducing data entry requirements.

- Implemented an automated Contract Tracking and Payment System (CTPS). This system encumbers funds for each contract, and provides for payment on the contracts. Letters to vendors (contractors) are produced automatically by the system. All accounting transactions related to contracts (including encumbrances,

payments, journal vouchers, and accruals) are transferred from the system electronically to SBAS (RJE) to reduce data entry requirements.

- Implemented a data system in the counties for tracking infants at risk. The Follow Me System is used by the Childrens' Special Health Services Section.

MONTANA HISTORICAL SOCIETY

Description

The Montana Historical Society, (authorized in section 22-3-101, MCA) acquires, conserves, advocates the protection of, provides broad access to, and interprets Montana's varied historical resources; thus promoting (for its citizens and for all others) the use, understanding, appreciation, and enjoyment of those resources. The Society maintains a library, an archives, an art gallery, a museum, historical exhibits and manages historic sites and buildings; publishes *Montana, The Magazine of Western History*, a newsletter, and other historical works; and provides educational information. The Society also administers the National Historic Preservation Act and the State Antiquities Act.

FY96-97: Planned Projects, Initiatives and Goals

- Set up short-term and long-range plans to automate the needs of the Society and bring it current with Information Technology.
- Continue to upgrade computers to enable them to run Windows software.
- Find alternate funding to enable the purchase of a Desk Top Publishing System to produce exhibit labels, small signage, printed materials (such as brochures, posters, invitations, forms, etc.)

FY98-99: Future Projects, Initiatives and Goals

- Upgrade individual PC's and networks and adapt Novell NetWare for the entire agency. Implement any short term plans as outlined by the research in FY 96 and 97.
- Acquire on-line status to WLN (Western Library Network cataloging service) for the Library program. This would provide more efficient service and access not only to the Library but Photo Archives and Archives as well. This service is now acquired on a daily basis through the State Library.
- Implement a Collection Management System in the Museum Program. The Museum collections are currently cataloged and tracked using a card system that is managed by hand. A data base sufficient to track over 40,000 objects with the capability to search in multiple fields is needed.
- Connect to Internet to give researchers around the country access to the Society's collections.

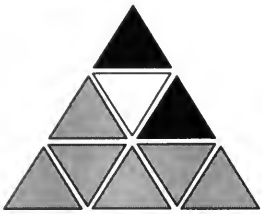
- Adopt scanning methods and CD storage for collections such as Photos. This will enable the public to review collections without harming the originals.

Accomplishments

- Acquired a desktop publishing system for the typesetting and publications design of *Montana, the Magazine of Western History*, book publications, and production of publications such as brochures and technical leaflets.

- Completed phase three of the Archives program's machine searchable catalog of its holdings using STAR database on a Sun SPARC station. All manuscript, state record, oral history and archival microfilm collections can now be searched via keyword at a broad descriptive level. Since acquiring the database all new processed collections have been entered into the database to the box and folder level, allowing keyword access to all folder titles in the collection. This has been completed for 35 manuscript collections, and 23 records series.

- Upgraded the State Historic Preservation Office computer system to Novell NetWare. This upgrade allows all computer users in the office to use all available software, without purchasing multiple copies. There are now four computers that have the capability to run the statistical and database software necessary for keeping up with the demands of our business.



JUDICIAL BRANCH

Description

The judicial power of the state is vested in the Supreme Court, District Courts, Justice Courts, and such other courts as may be provided by law. The Supreme Court consists of one chief justice and six associate justices elected by popular vote for an eight-year term. The Court Administrator manages the administration of the judicial branch.

FY96-97: Planned Projects, Initiatives and Goals

- Continued funding and support for the existing sites using the automated Montana court systems and new funding for non-automated sites is integral to addressing growing case loads and persistently restrictive budgets. Implementation of automated standards will minimize system incompatibilities, allow for statistical and financial record keeping, and enhance judicial case management analysis.

- Continue enlarging the current user base--both in networked and standalone units. By using telecommunications products and other appropriate technologies to provide technical support, technical personnel will be able to enhance reliability.

- Construct statewide court network links for Montana courts and nationwide information systems by utilizing statewide resources such as the State Data Network and SummitNet.

- Develop and enhance the Montana Judicial Case Management System (MJCMS). Work in this area will continue due to needed statutory maintenance; enhanced portions, such as restitution management module; jury selection, licensing functions, forms generation and management, calendaring, and motion tracking.

- Provide a commitment to the entire court system, Supreme Court, District Court, and Courts of Limited Jurisdiction (justice of the peace and city) of high quality and more frequent training, support, upgraded equipment, and staff expertise. Consider imaging costs and benefits to the court system.

FY98-99: Future Projects, Initiatives and Goals

- Completion of any remaining court sites not yet automated, networked, or linked to the statewide and national systems.
- Provide continuing support for the automated court information system, and provide current and appropriate technology equipment to those courts.
- Implement imaging for the Montana Court system.

Accomplishments

- Continued to expand automation, and improved and supported existing sites. The Office of the Court Administrator (OAC) currently supports over 400 users on 18 local area networks numerous standalone workstations in over 30 counties. With recent system enhancements, these systems conform to the Montana Supreme Court Order mandating uniform standards for all court automation. The adopted standards ease product procurement, installation, and support of these systems. The OAC office has established closer working relationships with court clerks and judges to allow for MJCMS product migration, and has maintained excellent coordination with local elected officials in the funding and acquisition of these systems.
- Provided automation and training for courts. Except in jurisdictions where local technical expertise exists, Court Services technical personnel do the following: plan, propose, configure, ship, and install all hardware, software, and network components. Training is provided on site and regionally (on a regular basis) in areas relating to virus protection, data management, backup/disaster recovery strategies, data security, productivity tools, and spreadsheets.

  After the new site becomes familiar with the new environment, the judicial case management software developed by the Office of the Court Administrator is installed. The package consists of a court management information system that allows for fee tracking, case management, and reporting for all case types.
- Forged a partnership with Montana State University, Local Government Center, to automate the Courts of Limited Jurisdiction. The partnership allowed the OAC to automate limited courts using University expertise and University facilities for development, training, installation, and providing ongoing hotline help. With continued funding this partnership is expected to grow and allow University expertise to assist the judicial system to move into the automated age.
- Planned and began implementation of an integrated automation system for all functions of the State Law Library. Modules include an

online public access catalog, circulation, serials control, acquisitions, and cataloging. The system was chosen in cooperation with the State Library and the university system libraries; users at any site in the state will be able to search the holdings of any major library in Montana. Networking of various CD-ROM legal research products for remote use by government employees is being investigated. Members of the Law Library's staff were involved in intensive training for Internet use, and are now working with the State Bar of Montana to assist the officers of the Court with Internet access.

DEPARTMENT OF JUSTICE

Description

The Department of Justice (headed by the Attorney General, the chief legal and law enforcement officer of the state) protects the citizens of the state through enforcement of civil and criminal laws and through programs designed to provide public safety. It provides legal services for the representation of state agencies, as well as appellate legal services and legal assistance to county prosecutors throughout the state. It conducts criminal identifications and investigations, operates the law enforcement telecommunications system, administers gambling control operations, supervises the Law Enforcement Academy, adopts and enforces fire safety codes, registers motor vehicles, issues driver's licenses, enforces motor vehicle laws, and provides technical and financial assistance to law enforcement agencies.

FY96-97: Planned Projects, Initiatives and Goals

- Prepare Montana's Criminal Justice Information Network (CJIN) for major enhancements that are part of the FBI's upgrade of its computer system at the National Crime Information Center (NCIC 2000) in Washington, D.C. In the second year of the biennium, the Department will begin to move the CJIN software and hardware system off the mainframe at the Armory to a mid-range computer.

- Continue to make the networking of PCs into Local Area Networks (LANs) a top priority during the biennium. This project is viewed as an essential foundation for Department-wide sharing of information between work groups and between Helena Division offices and regional and field offices. Networking allows for effective management of information resources and for essential backup and recovery of data and other information.

- Implement a statewide computerized network to track video gaming revenues and tax collections from Montana's approximately 14,500 video poker and keno machines. The proposed system stems from a recent Legislative Audit report that recommended a computerized "dial-up" system to more efficiently manage the Department's responsibilities for inspection and tax collection.

- Examine the application of computerized imaging of documents to determine the best and most economical manner in which imagining technology can be used throughout the Department to more efficiently process documents. The Motor Vehicle Division will begin

a pilot project in FY 1995 to examine imaging, storage and retrieval of driver's licensing information.

- Conduct several projects aimed at significantly enhancing the ability of the Highway Patrol to document arrests and to gain access to critical public safety information in patrol vehicles. These projects involve installing video cameras in patrol vehicles, equipping vehicles with geographical positioning devices that will aid in accurately identifying the location of the vehicle, and equipping vehicles with laptop computers that will provide access to word processing and to the Criminal Justice Information Network for immediate in-car checks of wants and warrants, title and registration, driver licensing, and other information.

FY98-99: Future Projects, Initiatives and Goals

- Move the Criminal Justice Information Network system from the current IBM 4381 mainframe computer to a mid-tier computer platform in the 1998-99 biennium. Planning and initial conversion of hardware/software will begin in the last half of FY 1997.

- Complete the final phases of the CJIN and NCIC 2000 project. During these years, CJIN will be moved to a mid-tier platform and will offer (in selected areas) access to criminal justice information images such as mugshots, photos and fingerprints. Access to CJIN data in vehicles will also be enhanced.

- Evaluate the application of imaging technology to document processing needs during the 1996-97 biennium and decide upon a Department-wide imaging standard. With a standard in place, the Department intends to pursue the use of imaging technology in at least one large project during the 1998-99 biennium. The project will involve re-engineering traditional work processes around document processing that is available in an electronic form.

Accomplishments

- Transferred the Motor Vehicle Division's Title and Registration and Driver Licensing automated systems from the Armory mainframe to the state's central mainframe processor at the Mitchell Building. This project--a cooperative effort between the Department of Justice and the Department of Administration--took approximately six months of planning and work. It was essential to maintaining cost-effective and timely processing of Motor Vehicle Division applications that are used by citizens statewide to register and title vehicles and by the Division to process drivers licenses. The transfer also allowed the Department to continue using the Armory mainframe for CJIN for another biennium in order to better plan CJIN enhancements, migration to a mid-tier processor, and link with the NCIC 2000 program being implemented by the FBI.

- Implemented a new system of capturing and producing driver licenses. The new driver's license includes digitized photograph and signature information and a number of security features that discourage fraudulent use. The system also allows examiners to work either on-line with the host in Helena or off-line. The off-line option is used in smaller exam stations that are not part of the state network or when the state system is unavailable. In off-line mode the Division can continue to serve citizens, later matching data against the host files.

- Stabilized CJIN Message Switch. The Criminal Justice Information Network has at the heart of its system a computerized "message switch" that acts like a traffic cop to direct inquiries--about criminal history records, wants and warrants, stolen vehicles, vehicle or driver licensing information--to the appropriate data base. This message switch is critical to the CJIN system but has had little maintenance in the past 10 years. The move of the motor vehicle databases to the state's mainframe necessitated numerous enhancements to the message switch in order to maintain its ability to serve the criminal justice community.

- Pursued networking of PCs as a priority. The Department identified networking of local area networks as a top priority during the 1994-95 biennium. This was viewed as establishing a solid, cost-effective foundation for present and future computerization projects. By January 1, 1995 the Department will have 15 LANS that network central, regional, and field offices around the state. The Department of Justice's personal computer environment currently includes nine primary local area networks and three sub-systems running off the State's telecommunication network servicing law enforcement agencies, county treasurers and field driver examiners. There are 711 networked devices--521 on the STN and 209 on local area networks. The Department will be installing seven new networks, adding 137 devices to the LAN count before 1995.

- Completed a criminal history records backlog reduction program. During the biennium the reduction program of the Identification Bureau of the Law Enforcement Services Division allowed it to enter approximately 10,000 fingerprint cards and 35,000 dispositions into the Criminal History Records Program. The program now has no significant backlog.

DEPARTMENT OF LABOR AND INDUSTRY

Description

The Department of Labor and Industry provides employment and training, protects conditions of workers, and protects employer/employee rights. Its functions include: providing service to people actively seeking employment and to employers seeking workers; supervising and enforcing labor laws and worker health and safety standards; working to eliminate discriminatory practices, and administering state collective bargaining, workers' compensation and unemployment insurance laws.

FY96-97: Planned Projects, Initiatives and Goals

- Develop an on-line automated purchasing system utilizing Powersoft tools with the Oracle client/server engine. Initially, this project will reside on one server with limited access. The system will be deployed statewide when SummitNet connections are available to all local offices.

- Develop a system to allow electronic reporting of claims data from Worker's Compensation insurers thru EDI (Electronic Data Interchange).

- Downsize job service mainframe applications to a mid-tier or pure client/server environment. Job Service Division (JSD) will also establish seamless connectivity to the Federal job information system, America's Job Bank. Continue to integrate data collection with other state agencies in order to provide a "one-stop shop" for customer requests. Finally, JSD will continue to automate and expand its customer self-referral capabilities by providing further capabilities such as job seeker self-referral and employer automated job order entry.

- Continue the enhancement of the Interactive Voice Response (IVR) system for the Unemployment Insurance Division (UID). Future plans envision additional claimant inquiry options and the possibility of offering various inquiry options to enable employers to obtain information on their Unemployment Insurance accounts.

- Consider plans to reengineer or replace the aging unemployment insurance benefits system (BeAR). This plan would be dependent upon obtaining sufficient funding ($3 - $4 million, usually in the form of grants from the federal level) for a two or three year project. In the meantime, the division will need to continue to make needed

programming changes on a priority basis using both the in-house programming resources and contracted services.

- Implement Phase II of WARP (Wage Automated Reporting Program) to expand the wage reporting system. Excess wage calculation and tax calculation will be included to allow for a paperless reporting system. The employer will be able to submit their tax return information via diskette, modem, or magnetic tape.

- Complete the phone claims study in FY 1995 which may result in implementation of a central or regional phone claims process which would require enhanced telecom and data processing capability.

- Install two new major statistical surveying programs obtained from the Federal Bureau of Labor Statistics. These will be installed in a client/server network by the Research and Analysis Bureau.

- Implement the necessary hardware and software to allow for the data entry of telephone survey information directly into the computer.

- Establish a connection to the Internet in the Research and Analysis Bureau.

- Continue investigation by the Human Rights Commission (HRC) of procedures to integrate the Unix HERO database into the local area network.

- Explore the benefits of imaging as a file storage mechanism and achieve access to Lexis, bulletin boards, and other information systems for the HRC.

- Connect outstationed employees with the local area network via a remote server.

- Continue software and hardware upgrade programs in all divisions.

FY98-99: Future Projects, Initiatives and Goals

- Work toward a "paperless" department. This means it will be a must to have all of Local Offices and the offices here in Helena connected to the backbone via bridges and/or SummitNet before this can be a reality.

- Merge Job Service database with federal database (America's Job Bank) while maintaining integration with other state agency databases.

- Discuss the development, reengineering , and/or maintaining the unemployment insurance benefits system (BeAR) discussed above in the 1998-99 biennium and beyond.

- Investigate the automated delivery and use of Labor Market Information in employer's worksites, educational and training sites, residences, and customer access sites to maximize access and usability.

- Continue to upgrade outmoded and aging hardware and software systems.

Accomplishments

- Completed the Worker's Compensation Automation Project (WCAP).

- Updated the Employment Relations Division token-ring network to operate at 16MB utilizing a Cisco router between rings instead of three bridges.

- Completed the installation of the first multi-media (kiosk) facilities in Montana, with eight units installed and an additional 28 to be installed this fiscal year. Along with kiosks, Job Service Division has installed five Job Information microcomputers for customer use. An additional 29 are to be installed in the state by the end of this fiscal year. In total, Job Service will have provided over 70 information delivery devices in locations throughout the state.

- Redesigned and rewrote of the Unemployment Insurance Contributions (tax) System. This mainframe project is scheduled to be completed in March, 1995.

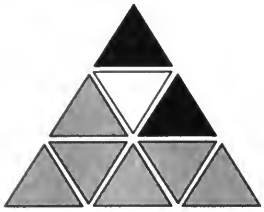
- Finalized a system to allow employers to submit their quarterly wage reports via diskette or modem instead of mailing their reports. This option became available in September, 1994. Initial comments from employers indicate a high degree of employer acceptance of this feature.

- Gave Unemployment Insurance field representatives the ability to dial into the division's LAN in order to submit their audit reports and in order to obtain information from the mainframe from an employer's UI record.

- Finalizing Interactive Voice Response (IVR) project--expected to be operational by the end of FY 1994. IVR will enable claimants to inquire on the status of their benefit check and file their continued claims for UI benefits by pressing keys on their telephone to obtain information or submit information directly to the UI benefit system without staff intervention. This service will be available at least 18 hours a day, seven days a week.

- Made Montana's labor force data accessible to all through the Montana Bulletin Board System and a regional bulletin board in Salt Lake City.

- Completed major equipment and network upgrades in the Workers' Compensation Court and the Human Rights Commissions offices.



LEGISLATIVE BRANCH AGENCIES

Description

Office of the Legislative Auditor, Legislative Council, Office of the Legislative Fiscal Analyst, Environmental Quality Council, Montana House of Representatives and the Montana Senate

The Legislature of the State of Montana consists of two bodies: the 100 member House of Representatives and the 50 member Senate. The Legislature is assisted by the Legislative Council, the Office of the Legislator, the Office of the Legislative Fiscal Analyst, the Environmental Quality Council, the Consumer Counsel, and various interim committees.

Note: For purposes of IT support and planning, the Consumer Counsel acts as an independent agency. Their Plans and Accomplishments are listed separately in this section.

FY96-97: Planned Projects, Initiatives and Goals

- Finish the conversion of the Legislative Branch to Novell NetWare 4.X.
- Continue LAN maintenance and upgrades. Tasks include replacing obsolete workstations; upgrading software to current releases; ensuring adequate backups, UPS and other recovery procedures for file servers; upgrading the LAN software; and upgrading the file servers with memory and hard disk.
- Convert the Legislative Branch to the Windows environment.
- Convert some of the smaller in-house database systems to Oracle. This project is intended to give branch technical staff enough expertise to begin the conversion of a major database system the following biennium.
- Establish a central IT staff located in the Legislative Council which will provide network, PC, and application development services for all Legislative Branch agencies except the Consumer Counsel.
- Finish the conversion of Montana Code Annotated Update process to the PC Network.

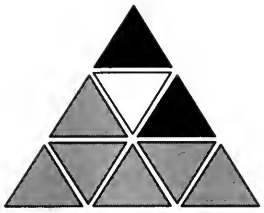
FY98-99: Future Projects, Initiatives and Goals

- Continue to convert existing database applications to Oracle. Candidates for conversion are: Bill Status System, LFA Budget System, Legislative Audit Management System, and several in-house inventory and tracking systems.
- Continue to work toward building an integrated Legislative Information system which combines all applicable legislative systems into one integrated information system.

Accomplishments

- Continued to move toward coordinated and centralized planning, budgeting, procuring and implementation of network-related functions and services for the Legislative Branch.
- Began the process of converting the branch network to NetWare 4.X. Some branch agencies are on OS/2 LAN Server. This conversion would put all agencies on the state standard for network operating systems.
- Provided assistance to the 1993 Legislature in the analysis of the proposed school foundation/equalization legislation. Legislative staff worked with legislative committees and individual legislators in the design of the formulas to analyze the impact of the legislation on various school districts and district taxpayers.
- Updated a primary audit software package to enhance auditor productivity and report preparation. A contract was established with outside consultants to improve the existing mainframe/micro computer applications. The project improved the usability of the information obtained, and increased productivity for office personnel.
- Completed conversion of the Bills Process, a mainframe operation from 1973 to 1993, to run on the PC network using WordPerfect. The print formatting capabilities of WordPerfect have produced a more professional looking and more flexible bill format than was possible before. Users on the Branch network will be able to search the text of bills for words or phrases and thus locate bills dealing with specific subject matters. Also, it will be easier to hire and train Bill Processing session staff since the job market has people with WordPerfect experience. A third benefit is that public access to the text of bills may be more easily supported, for example, by placing the text, with only minor conversion, on the State Bulletin Board.
- Conversion of the Montana Code Annotated Update process from the mainframe to the PC network has been partially completed. Once this process is completed, the updating will be more streamlined and less prone to error.

- Upgraded the Senate Vote System. The wall display on the old system had become obsolete and the newer technology in Vote/Agenda Systems allows the two systems to be integrated into one, requiring only one operator.



DEPARTMENT OF LIVESTOCK

Description

The Department of Livestock exercises general supervision over the livestock industry and protects livestock from theft and disease. Its functions are enforcement of livestock laws, including the registration of marks and brands; regulation of livestock markets; rabies control; predatory animal control; meat inspection; and dairy, egg and milk inspection, control and regulation.

FY96-97: Planned Projects, Initiatives and Goals

- Enhance the Montana Brands System. The enhancement will display an image of the brand along with ownership information. The accuracy of verifying ownership will be improved.
- Begin testing Novell NetWare 4.x for the department's conversion. The new version will be in production in FY97.
- Connect the department's fifteen remote offices access to the local area network in Helena. Each office has need of information that is stored locally.
- Attach to the Information Highway using the Internet. Several divisions will benefit from communication with other government and university entities.
- Upgrade all computers to run Windows and access the state electronic mail system.

FY98-99: Future Projects, Initiatives and Goals

- Convert DOS-based database applications to Windows-based applications.
- Prepare for the next rerecording of all Montana brands which occurs every ten years and is scheduled for 2001.

Accomplishments

- Implemented a replacement plan for old computers that are not adequate to run state standard commercial software. Upgraded in-house systems to improve speed and ease of use. Added electronic mail capability for Helena and Diagnostic Lab employees.

- Designed, developed, and installed a computer system that brought the data entry function for our Montana Brands System in-house. This system is saving our department between $2000 - $4000 per fiscal year. It will save as much as $7000 - $8000 during rerecord years.

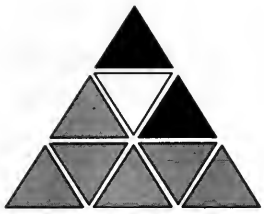
  Brand customers also see an improvement in service. The turn-around time for documents is now 2-10 days, down from 2-3 weeks.

- Re-designed, developed, and installed a new system to track deputized veterinarians. The new system centralizes information for systems across three divisions.

- Made modifications and additions to the Diagnostic's Laboratory's Information System. The Clinical Pathology and Bacteriology sections were brought on-line. The sections interface with the Receiving Room eliminating duplicate information. Both sections complete their own reports, reducing paperwork for the front office. Test results from these sections and the Histology section is available on-line to every user in the lab.

  Serial communication capabilities between laboratory equipment and system databases was accomplished. Information is transferred electronically--reducing operator errors and saving time.

- Established direct communication between our main office in Helena and our Diagnostic Laboratory in Bozeman. The communication link has improved response time for network administration and system modification needs. It will also eliminate some travel expenses.



DEPARTMENT OF MILITARY AFFAIRS

Description

The Department of Military Affairs provides a trained and equipped military organization via the National Guard in the event of a state emergency; plans for, responds to, and recovers from any disaster (manmade or natural) and provides assistance to all veterans, their dependents and beneficiaries who may be entitled to veterans' benefits.

FY96-97: Planned Projects, Initiatives and Goals

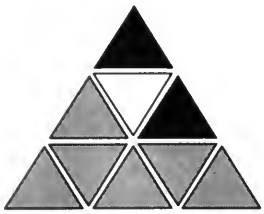
- Install a LAN in our Disaster and Emergency Services Division.
- Work with ISD on installing a router so we can have utilization of available technology.
- Expand our existing LAN in Operations and Support to other divisions.
- Establish an internal committee to analyze and monitor current processes and future acquisitions; and set goals and objectives in this area.
- Write policies and procedures.

FY98-99: Future Projects, Initiatives and Goals

- Connect existing LANS and maximize usage of our computers.

Accomplishments

- Installed a LAN in Operations and Support Division.
- Upgraded PCs from 286 to 486.



DEPT. OF NATURAL RESOURCES AND CONSERVATION

Description

The Department of Natural Resources and Conservation guides the management, development, conservation and use of certain natural resources in a manner consistent with Montana's environmental quality. DNRC works to sustain and improve the benefits derived from our water, soil, and rangeland; to encourage conservation and the use of renewable energy sources; to reduce losses from flooding; and to minimize environmental impacts from the development of energy sources, energy facilities, and water projects.

FY96-97: Planned Projects, Initiatives and Goals

- Improve access to the Water Rights information for Geographic Information System (GIS) use so that Reserved Water Rights Compact Commission (RWRCC) staff can point and click for access and obtain output in graphic (map) and report formats.
- Provide FTP (File Transfer Protocol) and dial-in access for non-agency clients to GIS data (spatial and documents) related to ongoing negotiations with RWRCC.
- Implement the use of GIS in watershed planning and management by integrating GIS systems with digital hydrology and water quality models. This will enable analyses of impacts of existing land uses and land use changes on streamflow and water quality and the production of better products to enable the public to better understand the effects of various alternatives.
- Evaluate changes needed and develop charging methodology to allow implementation of access to the Water Rights Records system by non-state agencies such as the public, law firms, Federal agencies, etc. while maintaining adequate database security.
- Evaluate the technology for the use of portable PCs and portable printers with modems for use when doing field inspections of oil and gas activities. If feasible and within funding available, implement the technology for reporting on inspections and researching data bases.

FY98-99: Future Projects, Initiatives and Goals

- Be able to do image processing of remotely sensed data (satellite imagery) with applications for water rights, irrigation, and hydrologic watershed modeling.
- Evaluate data sharing on existing applications such as Department of Revenue's CAMAS to promote more accurate record keeping on Water Rights ownership and legal description.

Accomplishments

- Started a digital inventory of irrigated lands in Montana. Initial efforts have been in the Clark Fork river basin and on Indian Reservations with ongoing negotiations on Water Rights Compacts.
- Installed a GIS workstation in the Facility Siting Bureau. It is being used in evaluating alternatives for various ongoing siting efforts.
- Remodeled the Oil and Gas Production System to enhance screen presentation and reports. User access has also been improved.
- Upgraded heavily used VAX CRTs with networked PCs to provide better response, more flexibility and capability, and improved connectivity to DNRC data processing resources.
- Initiated a PC upgrade replacement plan utilizing maintenance funds to replace all PCs on approximately a five year cycle. This enables staff to keep current with the latest PC technology within existing budgets.

OFFICE OF PUBLIC INSTRUCTION

Description

The Office of Public Instruction (headed by the elected Superintendent of Public Instruction) provides general supervision of the public elementary and secondary schools. The superintendent also disburses state and federal education funds; accredits public schools; certifies teachers; supervises pupil transportation, school foods and adult education programs; and administers federal and special education programs. The superintendent provides technical assistance to teachers and school personnel in such areas as basic skills, vocational skills, school finance, in-service education, planning, development, and evaluation.

FY96-97: Planned Projects, Initiatives and Goals

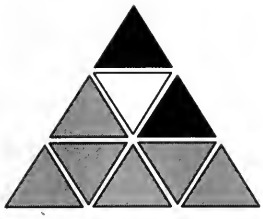
- Implement the Montana Automated Education Financial and Information Reporting System (MAE-FAIRS). The system was developed during 1993 and 1994 as a result of legislation passed in the 1993 Legislative session. The MAE-FAIRS system provides school districts located throughout the state with the ability to electronically compile and submit school district enrollment, budgets, and expenditure reports in the DOS and Macintosh environments to the Office of Public Instruction. The system was developed by KPMG Peat Marwick in conjunction with OPI staff. The MAE-FAIRS system will continue to be updated with additional enhancements, and the number of districts completing electronic transfers is expected to double in FY 96-97.

FY98-99: Future Projects, Initiatives and Goals

- Continue to expand the MAE-FAIRS system to provide services to local districts.

Accomplishments

- Completed the first phase of the MAE-FAIRS electronic reporting system. School Districts in 150 locations throughout the state participated in the first submission of data. The completion of this phase of the MAE-FAIRS project enables 495 school districts to report data and communicate with OPI utilizing existing hardware and software.



DEPARTMENT OF PUBLIC SERVICE REGULATION

Description

The Department of Public Service Regulation (the administrative arm of the Public Service Commission, a five member elected commission) regulates the public utility, motor carrier, and railroad industries. It is responsible for providing safe, reliable, and adequate services at the lowest achievable cost to the consumers while concurrently providing the regulated industries with a fair and reasonable return on their investment for the services rendered.

FY96-97: Planned Projects, Initiatives and Goals

- Continue with the conversion of the agency's entire computer system from a mid-range platform to a local area network (LAN). The overall agency automation plan calls for an upgrade of Commission computer equipment, a software upgrade, and data conversion from a mid-range to a personal computer platform.

FY98-99: Future Projects, Initiatives and Goals

- Develop and expand telecommunications capabilities, for example, with electronic transfer of data between the agency and regulated utilities.

Accomplishments

- Installed a 44-node LAN with a gateway to the mid-range computer; all previous dumb terminals and dot matrix printers have been replaced with personal computers and laser printers.
- Connected the Commission LAN to the Capitol Complex Backbone (CCB).
- Moved from a DOS to Windows operating environment.
- Began the initial design and implementation of a conversion program between mid-range and personal computer platforms.

DEPARTMENT OF REVENUE

Description

The Department of Revenue administers approximately 31 state taxes and fees including individual income tax, oil and coal severance tax, corporation tax, payroll tax, property tax, and numerous miscellaneous taxes. The department also operates the state liquor store system, and conducts investigations on alcohol and tobacco fraud activities.

FY96-97: Planned Projects, Initiatives and Goals

- Implement Electronic Data Interchange/Electronic Funds Transfer (EDI/EFT) for Withholding/Old Fund Liability Taxes (WH/OFLT). The pilot EDI/EFT project, which was initiated in FY95, will be expanded to comply with proposed legislation mandating electronic filing and payment remittance for all employers reporting withholding in excess of a designated annual threshold. Interactive Voice Response (IVR) technology will also be considered as another option for employers to allow submission of withholding filings and payment through a touch tone telephone.

- Use EDI/EFT for Individual Income Tax. The scope of this project will expand to include a suitable means for electronic funds transfer of payments remitted by taxpayers filing a tax due individual income tax return.

- Acquire and install an Imaging/Optical Character Recognition (OCR) System. This technology promises to greatly reduce the manual filing, storage, and retrieval of many of the paper documents submitted to the Department. In addition, it is anticipated that this automation effort would make the current data entry for tax returns a much more efficient process. The tax processing systems within the Department will be enhanced to effectively interface with this system. An ongoing effort will be made to redesign tax forms to better lend themselves to this technology and for ease of completion by the public.

- Modify the Withholding/Old Fund Liability Tax System (WH/OFLT) to align the Montana employer reporting periods with the federal schedule. This proposal advocates more frequent payment remittances and only one annual filing for the purpose of reconciliation. This will make filing easier for the taxpayers and accelerate the timing of taxes collected by the State.

FY98-99: Future Projects, Initiatives and Goals

- Expand the capabilities for electronic transmission of tax returns and payments for other taxes administered by the Department, beyond Withholding and Individual Income Tax filings--providing further service to taxpayers.

Accomplishments

- Developed and installed the second phase of the Business Equipment Valuation System (BEVS). The focus for this phase was on reporting capabilities that would provide county and statewide statistical information associated with the valuation and assessment of personal property.

- Implemented the pilot project for Electronic Data Interchange/ Electronic Funds Transfer(EDI/EFT) for Withholding/Old Fund Liability Taxes (WH/OFLT). It has afforded participating employers the opportunity to electronically transmit their filing and payment information over the phone lines through connections made between personal computers. This greatly speeds the entry of this tax data into the State computer systems and speeds the collection and deposit of the large amounts of tax monies involved.

- Designed a process for electronic submission of individual income taxes (EDI for Individual Income Tax (IIT)). The project was a collaboration with the Internal Revenue Service. The IRS tax processing system will perform some precursory edits of the State return data and will then transmit it via their Bulletin Board System to the Department for processing.

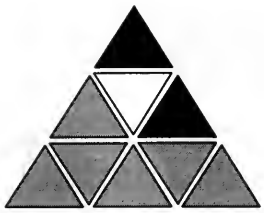
- Developed and installed the personal computer based Inheritance Tax System for improved taxpayer service, as well as improved staff productivity administering this tax. The system provides many records management functions and interfaces with the Department's Accounts Receivable System for tax collection functions.

- Installed the personal computer based Abandoned Property System. The system has made it possible for the Department to meet immediate demands from owners, heirs, professional finders, Department managers, and legislators for the current status of such properties. This system records and tracks abandoned property, owners, holders, and refunds; plus it has a variety of reporting capabilities.

- Developed the Master Ownership Database (MOD) System, a mainframe database for the Property Assessment Division. The new

database integrates real property data from the Computer Assisted Mass Appraisal System (CAMAS), which resides on a mid-range AS400 computer, with personal property data residing on the mainframe Business Equipment Valuation (BEVS) database. The MOD system facilitates the updating of ownership and tax information by county staff who previously had to update this information in as many as three individual computer systems, including each county system. The MOD system produces the annual assessment notices for all counties and has the capability of producing the tax bills for counties.

- Made major system enhancements to the Old Fund Liability Tax (OFLT) to comply with legislation for administering the Old Fund Liability Tax.



SECRETARY OF STATE

Description

The major duty of the elected Secretary of State is to establish and preserve records of the state of Montana. These records include the record of official executive acts, corporate records, uniform commercial code filings, certain bonds, and mortgages. Other duties include the compilation and updating of the Montana Administrative Register and Administrative Rules of Montana and direction of county elections.

FY96-97: Planned Projects, Initiatives and Goals

- Replace current mainframe applications with "in-house" system.
- Create an integrated electronic office environment.
- Improve customer service.
- Replace "Replace current mainframe applications with in-house system" to "Reengineer existing mainframe, PC and manual business systems using client/server technology".

FY98-99: Future Projects, Initiatives and Goals

- Reduce systems development costs.

Accomplishments

- Developed and implemented a new Corporations subsystem which performs the functions required by the Limited Liability Company Act.

DEPT. OF SOCIAL AND REHABILITATION SERVICES

Description

The Department of Social and Rehabilitation Services provides supportive and rehabilitative services to persons who are unable to provide such services for themselves. Functions include providing economic assistance, medicaid assistance, vocational and rehabilitation services, services to the blind and child support enforcement.

FY96-97: Planned Projects, Initiatives and Goals

- Enhance TEAMS (The Economic Assistance Management System) and SEARCHS (System for the Enforcement and Recovery of Child Support) to accommodate welfare reform initiatives under the Families Achieving Independence in Montana (FAIM) program.

- Evaluate imaging technology as a means of increasing productivity. Implement pilot projects to reduce paperwork, paper handling and storage and enhance access to information in Medicaid and Child Support enforcement programs. Pursue electronic file storage for Support Payments and other Child Support units. Currently, the Department stores photocopies of all checks received, over 800 per month, and the backup materials that accompany them, increasing space for storage.

- Implement Electronic Benefits Transfer for the issuance of food stamp and medicaid eligibility information.

- Implement online user and policy manuals as part of TEAMS.

- Reprocure Medicaid claims processing fiscal agent contract (Medicaid Management Information System - MMIS).

- Reprocure TEAMS facilities management contract.

- Study options for application of video conferencing technology in Department to reduce travel and enhance training programs.

- Increase efficiency of processing Child Support payments:

  Pursue electronic posting system that reads the magnetic strip on the bottom of checks. This system will reduce dramatically the number of keystrokes required to enter payments into SEARCHS. By reducing the number of keystrokes it is expected the division can process payments at least one day quicker.

Provide Direct Deposit of "pass through" child support payments to custodial parents. This option will speed up the delivery of payments by eliminating the postal mailing delay and associated postal costs.

Convert state agency paper documents submission of child support payments. Electronic transmission will reduce the keystrokes required for entry into SEARCHS and eliminate the delay in payment associated with sending and posting the paper documents. (Agencies that currently send paper documents include Department of Labor and Industry Unemployment Insurance Division, State Payroll, State Compensation Insurance Fund and all the Universities.)

- Enhance the electronic "absent parent location" matching capability of SEARCHS.

  Current interfaces with other federal and state resources include only Social Security Number searches. Efforts will be made to include additional searches of these data bases possibly by name and birthdate or other identifying data.

- Complete the design and implementation of the client database system on the RS6000. This is the largest downsizing effort undertaken by the Department with projected savings in computer operations costs in excess of $80,000 per year.

- Redesign the Department's Job Opportunities and Basic Skills (JOBS) system. This system is a statewide employment and training system which currently resides on distributed database microcomputer systems. Communications is currently done via dial-in modems and data transfer functions. We anticipate using the latest in client-server and TCP/IP technology available in state government to accomplish this project.

FY98-99: Future Projects, Initiatives and Goals

- Expand the use of imaging and voice response technology as a means of increasing productivity based on results of pilot projects in FY96/97.

- Expand implementation of Electronic Benefits Transfer to AFDC (Aid to Families with Dependent Children) payments and LIEAP (Low Income Economic Assistance Program) benefits.

- Complete and install two major client-server applications for the Department: The Client Database rewrite and the JOBS system redesign.

- Initiate statewide application communications utilizing TCP/IP. TCP/IP will allow the field offices to have direct communication with other SRS networks and the RS6000.

- Reprocure SEARCHS facilities management contract.

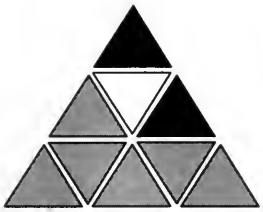
Accomplishments

- Implemented and installed statewide the System for the Enforcement and Recovery of Child Support (SEARCHS). SEARCHS was implemented over a four month period beginning in March, 1993, and ending in June of 1993. The SEARCHS computer system impacts approximately 42,000 families by assisting case workers in locating child support obligers, enforcing child support obligations and the collection and dispersement of child support payments. In August, 1994, the Department received a national award from the Federal Department of Health and Human Services for implementing the first certified, fully functional child support enforcement system. SEARCHS is currently being transferred to Alabama and Puerto Rico.

- Began the utilization of an IBM RS6000 computer for client server applications. This will drive down the computer processing costs for the Department and will enhance the Departments' ability to analyze Medicaid data for planning, evaluation, and utilization projection purposes.

- Implemented a reporting system for Medicaid claims, eligibility, and provider reporting called MEDSTAT that will enhance the decision making ability for program management and budget. This system will provide fast retrieval and analysis of information.

- Designed, developed, and installed the Montana Child Care System (MACCS) which automates child care eligibility determination, case management and provider payment issuance.



STATE COMPENSATION INSURANCE FUND

Description

The State Fund (a nonprofit, independent public corporation) provides an option for workers' compensation insurance to the State of Montana. Its primary mission is to provide employers an alternative to insure their liability for workers' compensation and occupational disease coverage. In addition, the State Fund provides insurance to any employer requesting insurance under the state plan. The State Fund operates as any other insurer: processing claims, paying indemnity and medical benefits, and providing services to policyholders.

FY96-97: Planned Projects, Initiatives and Goals

- Complete full conversion and implementation of all aspects of the integrated imaging and data systems developed under the Benefits Information System (BIS) effort.
- Develop a comprehensive medical management system, and integrate this system into the benefits system (BIS).
- Allow for full electronic data interchange (EDI) for medical providers billing the State Fund for services.
- Perform a business reengineering study and a systems re-design feasibility study for the Underwriting Department, including systems design for support of integrated imaging for policy files, potential new policy retention programs, and programs to support improved customer service.
- Complete a feasibility study for use of expert systems technology for decision-making in various aspects of the business, including medical payments and underwriting.

FY98-99: Future Projects, Initiatives and Goals

- Develop a comprehensive Underwriting Information System, incorporating image processing and EDI for policy application for coverage and for quarterly reporting.
- Begin work on integration of expert systems technology into existing systems.
- Expand EDI capabilities to other functional areas of the business with possible integration of voice response.

Accomplishments

- Replaced 150 1980's vintage "dumb" workstations with networked intelligent devices.
- Completed the development of an integrated data/imaging system for management of wage-loss claims. This project included completion of Business Re-engineering, External Design, Internal Design, Programming, a major Document and Data Conversion effort, and Training, Testing and Installation of most of the system.
- Completed a major rewrite of the Policy Services financial system. This project included systems changes to allow for collection of estimated premiums in advance of the coverage period and for monthly, quarterly, semi-annual or annual adjustment of the amount upon receipt of actual information for billing.
- Purchased and integrated an expert system to calculate and provide case reserves.
- Installed MCA and Directory of Legal Decisions on CD ROM and provided general access to critical legal information to Claims Examiners.

DEPARTMENT OF STATE LANDS

Description

The Department of State Lands manages the lands and forests granted to the state by the United States Government in order to achieve maximum sustained return to the school trust fund; administers the various mined-land reclamation laws, and provides fire protection services on state and privately-owned lands within Montana.

FY96-97: Planned Projects, Initiatives and Goals

- Provide continued support for the Trust Lands Marketing System and the Fire Protection Assessment System.
- Continue development of Geographic Information System (GIS) and Global Positioning System (GPS).
- Complete migration of PC operating systems from DOS to DOS/Windows.

Accomplishments

- Completed work on the Black Book system providing field offices with current lease data from the Trust Lands Marketing System.
- Connected the main DSL office in Helena to the State Capitol data network backbone.
- Initiated Global Positioning Systems (GPS) at three area offices. These systems allow the Department to better manage forested lands, plan and effect fire suppression, and determine geographic boundaries.
- Initiated a Geographic Information System (GIS) within the Forestry Division Fire Bureau. This system helps perform analysis of hazards and risks associated with property owners living near wildlands.
- Upgraded the network operating systems on each of the Department's three Novell networks to NetWare 4.X.

MONTANA STATE LIBRARY

Description

The Montana State Library, located at 1515 East Sixth Avenue in Helena, provides a variety of information services in three major divisions. The Statewide Library Resources section provides consulting services and assists with the improvement of library services statewide. It also provides a strong general reference collection, a depository of all state publications, and a partial depository of federal publications. Additionally, it receives six state and seven national daily newspapers.

The Natural Resource Information System (NRIS) of the Montana State Library provides a centralized access point for the many sources of information on Montana's natural resources. Online searches, data reports, and data dictionaries are available, and direct referrals are provided.

The Montana Talking Book Library is responsible for providing free library service to all Montana citizens who are blind, visually impaired, physically handicapped, or learning disabled as a result of organic dysfunction. This portion of the library is affiliated with the Library of Congress' National Library Service for the Blind and Physically Handicapped.

FY96-97: Planned Projects, Initiatives and Goals

- Purchase a library automation system and develop an automated clearinghouse which will both be accessible via the state computer network, Internet, and dial-in modems. Incorporate available and future Internet technologies into the overall automation services of the State Library to enhance our delivery of services.
- Continue to explore and implement access to Internet for all Montana libraries, working with ISD, Montana Telecommunications Advisory Council (MTAC), and ITAC to provide a "seamless interface" among all libraries statewide. Employ newer interfaces such as Mosaic to increase access to a greater variety of information. Enable users of libraries to interact electronically with all of Montana's sources of information, and with information world wide.
- Replace all XT and AT (286) PCs, upgrade memory on a number of machines, and add PCs to the local area network to increase efficiency; connect all remaining PCs to the state network.
- Expand and incorporate GIS technology into all aspects of information provision, and successfully translate the power of GIS technology for use in schools and libraries in Montana.

- Upgrade the automated circulation system for the Talking Book Library services via the state network.

FY98-99: Future Projects, Initiatives and Goals

- Provide a totally electronic "library" to state government and to all Montana citizens via their local libraries or via modems from their homes, which is not limited by location, hours of operation, or other such restrictions which currently exist.
- Provide access to comprehensive information in all formats -- print, sound, picture, etc. -- available from a single point of contact.
- Organize all of state government sources of information so that citizens call only one number to access the various collections, databases, services, etc.

Accomplishments

- Working with a federally-funded project known as Reference Point, installed a hypertext, multi-media kiosk in six libraries, including the State Library, in a pilot project to provide "virtual library" service at these sites. The database includes information on library services, community events, library holdings, etc. and is presented in textual, graphic, moving visual, and sound outputs. Working with Reference Point, provided comprehensive training for over 100 librarians throughout Montana on the use of Internet. This was a "training the trainers" effort, so the benefits should be felt beyond the participants.
- Implemented a small LAN, replacing existing 286 technologies with 486 technologies.
- Loaded the most heavily-used portion of the Natural Heritage Program's Biological and Conservation Data System (BCD) onto the U.S. Forest Service's mainframe computer in Missoula, allowing USFS personnel direct access to the information in the field via their Data General terminals. Preliminary statistics show a significant increase in the use of these data.
- Installed a terminal server in the State Library to allow for remote access to the state network for access to services such as Internet.
- Converted 1.5 FTE for information technology services: one a Statewide Technology Consultant, and the other an Agency Systems Administrator. These two positions give us the much needed ability to develop and implement new directions in information technology.

DEPARTMENT OF TRANSPORTATION

Description

The Department of Transportation constructs, maintains, and protects the state highway and bridge system including: planning and design; contract administration; materials design and testing; property acquisition; fiscal programming and cost accounting; enforcement of vehicle weight and dimension laws; and managing the state motor pool.

FY96-97: Planned Projects, Initiatives and Goals

- Continue to convert to metrics as required by the Federal Government. This impacts many of MDT's automated systems. A major programming effort is ongoing.
- Improve Geographic Information System (GIS) capabilities to take advantage of this technology in meeting its business requirements.
- Replace photogrammetry equipment, which is no longer supported by any vendor. This is a critical process within our preconstruction engineering program.
- Work toward the implementation of an Intelligent Vehicle Highway System prototype for the Motor Carriers Division. This system will allow MDT to electronically verify motor carriers' weights, licenses, permits and other credentials as the carriers cross points on the highway.
- Move toward a print-on-demand capability for contract letting proposals. This will provide enhanced service to MDT's contractors, as well as its engineering design units, providing more flexibility in engineering design changes in order to meet our increasing preliminary engineering program.
- Improve capabilities for access to database information via new end user tools such as Windows-based report writers and querying capabilities.

FY98-99: Future Projects, Initiatives and Goals

- Explore opportunities to use imaging technology for very diverse activities, such as records management, records archival and retrieval, and video imaging of highway infrastructure.
- Improve Local Area Network (LAN) management capability. This will be done to better plan and support expected increases in data traffic and usage.
- Utilize, in conjunction with departmental systems, information technology services external to the State, such as Internet and the potential benefits of the future Information Highway.

Accomplishments

- Provided VAX servers to district and area offices to facilitate office automation and to provide access to departmental database systems.
- Developed a pilot Geographic Information System. This system allows MDT users to ask multiple questions about our highway infrastructure and from this inquiry see resulting graphic displays along State of Montana highway system maps.
- Added CADD workstations and updated plotter hardware and software to meet the increased demands of MDT's expanding construction program.
- Set the direction for metrics conversion and completed initial project tasks.
- Developed a fully automated system for project financial planning and monitoring. This included the integration of MDT's Tentative Construction Program, Fund Obligation System, and Project Cost Scheduling System.

MONTANA STATE UNIVERSITY

FY96-97: Planned Projects, Initiatives and Goals

- Montana State University-Bozeman will release RFP for design and implementation of Campus Fiber Optic Network.
- Montana State University-Bozeman will initiate a plan to complete the networking of all buildings on campus with unshielded twisted pair. This includes the rewiring of buildings currently connected with coaxial cable.
- Montana State University-Bozeman will continue to utilize the Interactive Voice Response system purchased for the Northern Telecom switch. Projects such as Grade Reporting are planned after touch-tone registration is completed.

Accomplishments

Montana State University-Bozeman

- **Student Loans:** The program allows students to borrow money through the Stafford Loan program directly from the Federal Government. This greatly reduces the time and effort required to initiate loans and allows MSU to respond directly and efficiently to students financial needs.

  The system is based on software provided by the Department of Education, and a locally developed interface with our SCT Student Information System. Loan offers and acceptances are made through MSU, as with other financial aid, but the application and tracking of Direct Loans is accomplished through electronic communication between the Financial Aid Office at MSU and the Federal Department of Education Services located in Iowa City, Iowa.

  Because of an implementation decision made by the Board of Regents, the system was designed to restrict participants to those students who had not previously received Federal Stafford Loans. Beginning with year two of the program, the Stafford Loan program will be discontinued and 100% of loans will be Direct.

- **Student Accounts:** MSU-Bozeman has implemented a Student Accounts System for all students. Tuition and fees are debited to the individual student accounts, while financial aid and cash payments are credited to the account. While a defacto student account system has been in existence at MSU since the implementation of IA's SIS in 1988, this is the first year in which the feed of Financial Aid information has been included. Some of the advantages of the

current implementation include much more efficient and rapid awarding of financial aid dollars directly to the students; more immediate and accurate accounting of billings and receivables to FRS; reduced paperwork and paper shuffle for MSU's functional offices AND for the students; and development of a much more efficient and rapid method by which refunds are delivered to students with credit balances. The bottom line is that implementation of Student Accounts allows a much higher level of service to the students of MSU.

- **Interactive Voice Response (IVR)/Touch-Tone Registration:** Touch-tone registration technology has been adopted by over 200 colleges and universities across the nation. MSU-Bozeman has recently developed this new registration procedure. An advisory committee made up of students and faculty has been formed to review and discuss the issues and policies that will streamline this system.

  The CAT-Line registration system provides a more convenient alternative for the students at MSU. Using a touch-tone phone, students can register for classes from anywhere. A human voice has been programmed into the system to function as a guide through the registration process. The voice gives the students a listing of their classes, and who to contact if they have any problems. Over 300 students have tested CAT-Line, and the response to the new procedure was very positive.

  The goal of the Registrar's Office is to eliminate Johnstone registration completely, and make registration more convenient for the students, staff, and faculty advisors.

- **Online Budget System Prototype:** A Windows application has been developed to allow the department, dean's office, vice president's office and budget office access and enter General Operating budget data using a personal computer. It accesses and stores data on a central database file. It allows easy entering of allocation amounts, personnel salary and FTE amounts, and detail expense budgets.

  Users include, the MSU Budget Office, VP for Administration office, College of Business and College of Engineering. All were pleased with the ease of use and recommend it be extended to the entire campus and to other types of budgets (designated, auxiliary, etc). Further development of this program is contingent upon acquiring a central server database product that can accommodate more users with better control of data integrity and security.

Montana State University-Billings Library

- MSU-Billings Library has expanded the current automated library system to include Montana State University-Northern. The shared system creates a single, uniform database and each library operates various independent modules according to the librarys' needs (cataloging, circulation, public access, etc). MUSEnet is the telecommunications provider.

Billings College of Technology of the Montana State University

- MSU-Billings College of Technology is an authorized Microsoft Academic Training Center, one of only 5 in the country. The college is also authorized by Drake Training & Technologies to deliver computer based testing for numerous national organizations.

Montana State University-Billings

- MSU-Billings has completed a totally redundant fiber backbone to all campus buildings.

THE UNIVERSITY OF MONTANA

FY96-97: Planned Projects, Initiatives and Goals

The University of Montana - Missoula

- **Campus Network:** Completion of on-going, comprehensive campus building wiring project bringing all UM-Missoula campus locations, including offices, classrooms, and dormitories onto the existing fiber optic FDDI network.

  Relocation of campus network functions such as domain name services and e-mail services to distributed servers.

  Deployment of physical security and redundant equipment to ensure maximum network availability and integrity.

  Extension of information access through campus network-based LAN servers through Pathworks, Novell, and perhaps other LAN environments.

- **Inter-campus Communications:** Upgrade of data communications facilities from 56Kbps (or less) dedicated circuits to T1 (or better) frame relay service between the University's constituent units: UM-Missoula, Montana Tech-Butte, Western Montana College-Dillon, the Helena College of Technology campuses, the Missoula College of Technology campuses, the UM Biological Station at Yellow Bay, and probably Flathead Valley Community College.

  Establishment of a separate, high speed data communication facility between UM-Missoula and MSU-Bozeman.

  Development of interactive, compressed video communications between UM-Missoula and the above named locations for distant delivery of shared courses.

- **Support System Implementation Projects:** Completion of the implementation of Oracle-based administrative support applications for each of The University's constituent campuses. These applications include SCT's Banner HR Human Resource Information System, Banner Alumni/Development Information System, and several interactive voice response applications for student admission, registration, financial aid, and others.

Develop more effective uses of network communications, including e-mail and Electronic Document Exchange (EDI) to support inter-campus administrative activities.

Provide data communication capabilities linking the University's information resources with: Tribal and private colleges; K-12s; and Libraries.

Development and implementation of KUFM-TV, sister station to KUSM in Bozeman and the first Montana Public Television station in Western Montana.

The University of Montana - Mansfield Library

- Finish implementing the automated library system, GrizNet which was implemented for campus use, fall 1993. Updates, refinements, and additional modules will be put into effect during this time frame. GrizNet is available through the campus backbone and dial up to any citizen of the state. The holdings of the Missoula College of Technology and Helena College of Technology will be added to GrizNet. Eventually the database of Montana Tech will also be added to GrizNet.
- Improve and provide access to reference databases through LaserNet which is available through the campus network and dial-up to valid university faculty, staff and students only. The academic librarians of Montana are continuing to explore a consortium connection to reference databases to be provided through MUSEnet.
- Provide GrizNet and LaserNet access to UM students at remote sites in Helena, Kalispell, Butte and future locations. Currently exploring the possibility of reference service through video cameras linked to PC's.
- Mansfield Library, in conjunction with the ASUM Bookstore, will explore the development of electronic reserve for class materials.
- Investigating the transferring of archival photos to a digital video CD with cataloging attached. This service would involve scanning equipment, CD creation and duplication and loading of the material on GrizNet.

Missoula College of Technology of The University of Montana

- Completing upgrades of all instructional computer labs to 486 processor (or higher) machines.
- Provide instructors with computers.
- Networking all East Campus and West Campus stations to include support staff function, and instructor function in the shop areas as well as offices.

- Networking culinary area for instructional and snackbar purposes.
- Purchasing AutoCad Software and additional necessary peripherals for the West Campus instructional lab.

Helena College of Technology of The University of Montana

- During the year the College plans to continue conversion to the University of Montana Student Administrative systems including Financial Aid and possible Alumni and telephone registration systems.

Montana Tech of The University of Montana

- Expand distance learning utilizing 2 way interactive video.
- Implement multimedia classroom(s)

Western Montana College of The University of Montana

- Implement SCT Banner software systems, including Financial Aid, Human Resources, Alumni Development and telephone registration.
- Modernize and upgrade central computer systems to support new database software and increased usage.
- Renovate the Microcomputer Center, modernize and upgrade the lab's computer systems.
- Implement interactive compressed video for course offerings and conferencing.
- Continue to expand student access to Internet services. By the end of FY97 100% should have access and have received training.

FY98-99: Future Projects, Initiatives and Goals

The University of Montana - Missoula

- **Inter-campus Communications:** Continue to upgrade and improve data and video communications facilities between University of Montana and Montana University System locations as needed. This will likely involve deployment of ATM or other new technologies and may involve expanded bandwidth requirements.
- **Support System Implementation Projects:** Implement additional Oracle-based support systems, most notably SCT's Banner financial management system.
- Continuation and expansion of outreach projects.
- Continued development of KUFM-TV to a fully equal, independently operated public television station.

Missoula College of Technology of The University of Montana

- Create and network instructional lab(s) for the health occupations programs and instructors.
- Develop second instructional lab at the West Campus site.
- Include MacIntosh computers at the East Campus instructional lab.
- Upgrade all software to current versions or to software types currently being used by the industries in which students will be working.

Helena College of Technology of The University of Montana

- Continue expansion of network bandwidth and computing resources for curriculum based projects.

Western Montana College of The University of Montana

- Renovate and upgrade microcomputer equipment in the Model Classroom.
- Add computer connectivity to Matthews and Centennial residence halls.
- Modernize and upgrade central computer systems supporting office systems and micro services.

Accomplishments

The University of Montana - Missoula

- Development of a rich campus-based information technology environment featuring a wide range of distributed and central computing facilities.
- Deployment of a comprehensive, campus-wide fiber optic system which provides 100Mbps FDDI communications to every building on the campus.
- Implementation of an automated library system which includes campus-wide access to a on-line, public access catalog and an extensive collection of on-line CD-ROM information databases.
- Implementation of Oracle-based administrative support systems including, student information and financial aid systems which provide wide-spread on-line access to student academic and financial records.
- Participation in the statewide contract with Oracle Corporation to provide Oracle software for UM campuses.

- Negotiation, together with MSU-Bozeman, of an agreement with NorthWestNet to provide full state-wide access to Internet resources and services.

- Development of a successful major grant to begin operation of KUFM-TV, a full power, broadcast public television station for Western Montana.

- Developing grants focused on extending access to, and the use of, information technology resources and facilities to the K-16 educational community in Montana.

The University of Montana - Mansfield Library

- Provided automated catalog to the students and faculty in the fall of 1993. The catalog is accessible through the campus backbone, dial-up and MUSENET. The catalog contains the holdings of the Mansfield Library, UM Law School Library and Western Montana College. Access is available to citizens of Montana through dial-up.

- LaserNet, a compilation of twenty plus databases was connected to the campus backbone. This provided access to campus offices and dormitories.

Helena College of Technology of The University of Montana

- During the current biennium the College has appointed a Technology Coordinator. The College has successfully transferred, staffed and begun operation of the operation of the METnET Interactive Video System from the Capitol Building. It has also added a library Novell server and upgraded the educational Novell server from 20 to 250 users and added an Oracle database server to that system.

- Expanded the school's token ring LAN network by 40 workstations and expects to add about 40 more this year. It has begun teaching AS-400 curriculum through the use of PC LAN workstations.

- Installed, with the help of ISD, a Cisco router to connect to The University of Montana, other university units, state agencies on the capitol complex and the Internet.

Western Montana College of The University of Montana

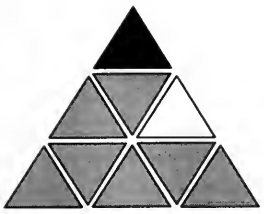
- Added TCP/IP connectivity, and began offering Internet services to the campus.

- Introduced Internet services to all freshmen through required Ed Tech courses.

- Implemented an on-line library card catalog and circulation system, remotely supported by the University of Montana.

- Provided CD services to the library through a local InfoServer 100.

- Provided voice mail and voice menus for faculty and staff.
- Extended use of bar coding to food service applications.



ENTERPRISE STATISTICS

Preface

This last section of Level 2 (The Enterprise Utilizing Information Technology-Enterprise Statistics) illustrates specific information technology resources currently available to the enterprise for implementing ISD and agency plans defined in the last section. University numbers have not been included.

These charts show estimated information technology expenditures, network growth (number and configuration of personal computers), bulletin board utilization, mainframe rates and usage, long distance rates and usage, and application development emphasis.

These statistics are important to the State of Montana because they: (1) illustrate how the state's information technology expenditures are distributed (personnel, training, hardware, etc.), (2) show the degree of financial support this state resource (information technology) receives--indicating its importance to the state, (3) emphasize information technology areas the state may be slighting (such as training), (4) show the state's information technology utilization trends (such as major expenditures in contracted services), (5) show and project a yearly increase in the number of terminals and personal computers attached to the statewide network, (6) show utilization of the State's Bulletin Board System, (7) show computing and voice rates and usage, and (8) show and project what type of information technology (imaging, EDI, etc.) will be researched or utilized in the future. These statistics are therefore important to the state for planning purposes.

Estimated FY94 Information Technology Expenditures

The Total Statewide Information Technology (IT) Expenditure of $46,597,883 represents a total of estimated expenditures gathered from OBPP's fiscal year disbursements. Not included in this figure are the Board of Public Education, The Commissioner of Higher Education, the University System, and other educational agencies. These figures have been determined to be representative of statewide agency IT expenditures, however due to variations in the use of object of expenditure codes these figures should be considered as estimates only.

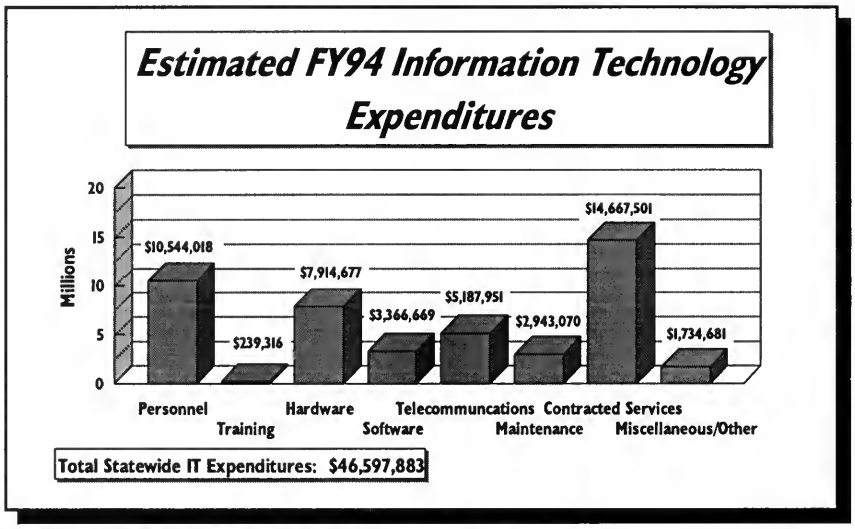


Chart I: ***Estimated FY94 Information Technology Expenditures***

Statewide IT expenditures were classified into the following categories: personnel; training; hardware, software, telecommunications, and maintenance; contracted services; and miscellaneous/other. These expenditures are described in more detail below.

Personnel

Represents all *classified* IT positions gathered from Personnel Position and Payroll (PPP), for the Executive, Legislative and Judicial Branches. There are, however, many state employees who indirectly perform IT functions who are not classified as information technology personnel, and who therefore are not represented in this figure.

Training

Includes IT education and training expenditures, and as can be seen are quite insignificant when compared to the overall IT investment. The importance of IT training is addressed in the Training Task Force Report in the ITAC Information Technology Strategic Plan. (See Appendix C regarding ITAC recommendations.)

Hardware, Software, Telecommunications, and Maintenance

These categories represent expenditures for IT assets, and the costs of maintaining them. These include: mainframe and PC hardware, mainframe and PC software, local and wide area network hardware and software, local and long distance voice and data circuits, and maintenance contracts.

Contracted Services

This is a significant expenditure and includes contracted programming and consulting services. The Department of Social and Rehabilitation Services's TEAMS and SEARCHS projects have been developed using contracted services, as well as the Department of Family Services Child Assistance and Protective Services project.

Miscellaneous/ Other

These expenses include data processing supplies such as: rent, paper, printing, microfilm, subscriptions and recruiting.

Estimated FY94 Information Technology Expenditures By Percentage

This representation shows each category of IT expenditure as a percentage of the total state IT expenditure.

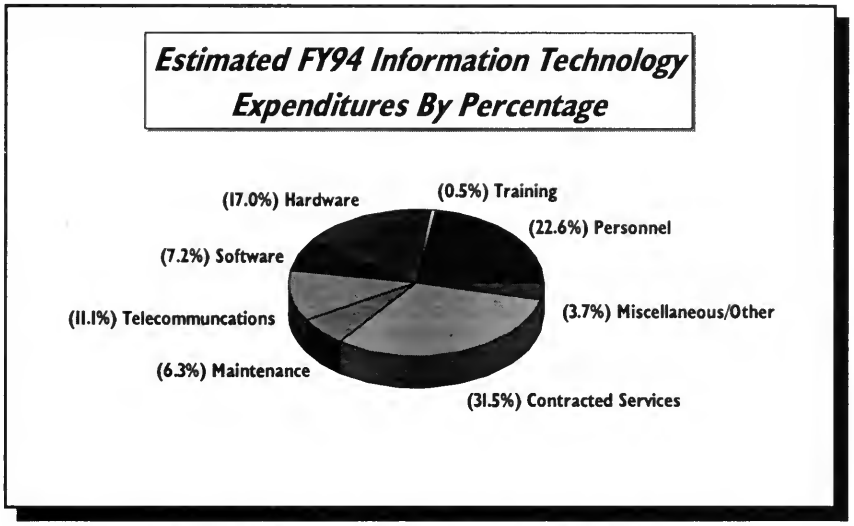


Chart 2: ***Estimated FY94 Information Technology Expenditures By Percentage***

IT Expenditures as a Percentage of Total Budget

The following illustrates the total statewide IT expenditure of $46,597,883 as a percentage of the total state budget. As can been seen, IT expenditures account for less than four percent of the total state budget of $1,461,761,768.

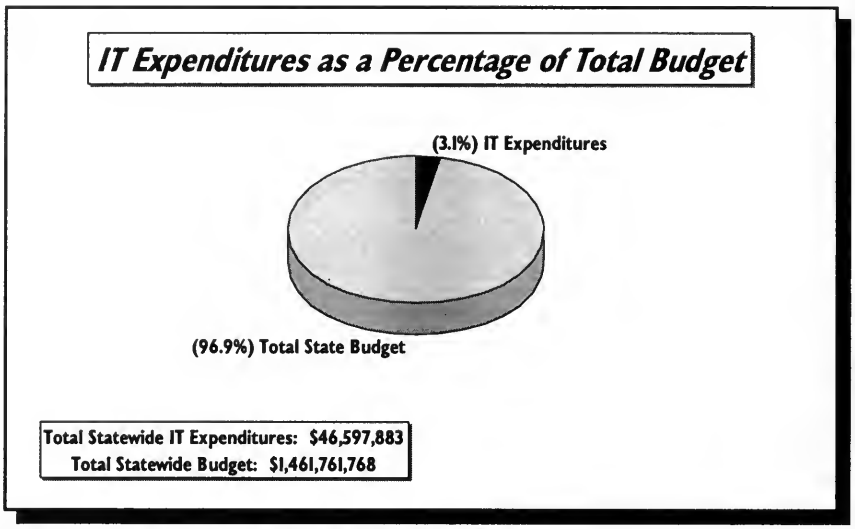


Chart 3: ***IT Expenditures as a Percentage of Total Budget***

Statewide Network Growth - Number of Terminals

Since July 1991 the state has experienced explosive growth in intelligent network attached devices. Represented by *intelligent terminals* (terminals with processing power i.e. personal computers) and *dumb terminals* (terminals with no processing power), in 1991 the state had 2,641 PC's and 1,569 dumb terminals.

Today, the number of PC's has grown to 5,593 while the number of dumb terminals has declined to 1,085. This trend is expected to continue into fiscal years' 1996 and 1997, and beyond, as computing power at the desktop increases and network demands grow.

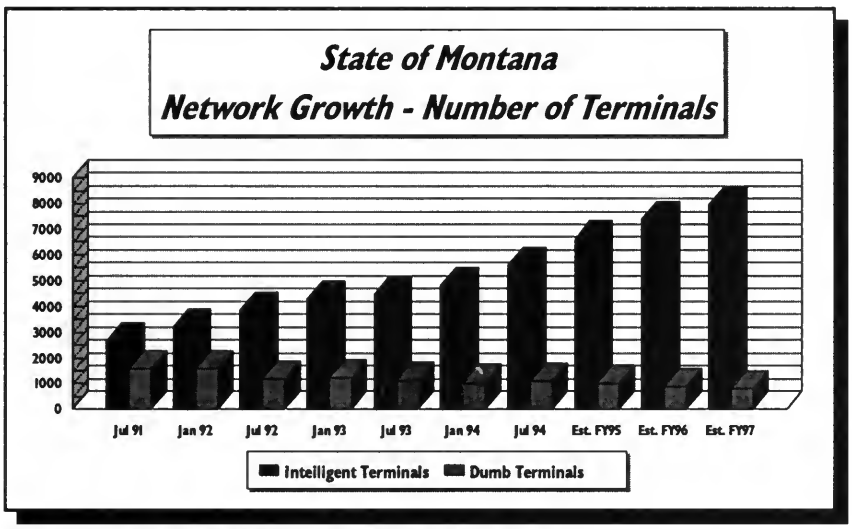


Chart 5: ***Statewide Network Growth - Number of Terminals***

Statewide PC Configuration

The following chart represents the configuration of the state's installed Personal Computer (PC) base. One aspect indicates that in fiscal year 1994, 76% of the state's PC base was 386 or better (i.e. Intel 40486 or 40586/ Pentium processor). Expectations are that by the end of fiscal year 1995, 88% of the state's PC base will be 386 or better.

The other aspect of this chart shows statewide use of the state standard Graphical User Interface (GUI), Microsoft Windows. This is an indication of how the state is progressing with the implementation of Windows. In fiscal year 1994, 24% of the state's PC's were running Windows. This number is anticipated to grow to 47% by the end of fiscal year 1995.

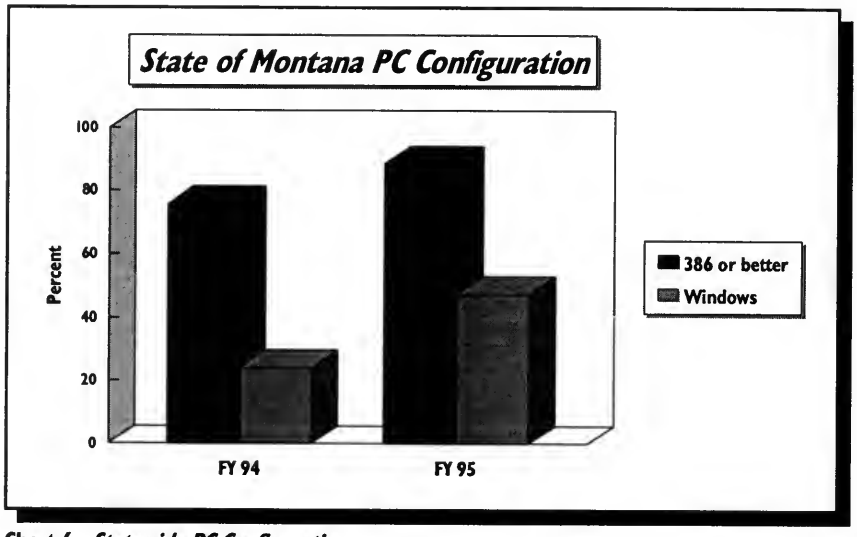


Chart 6: ***Statewide PC Configuration***

State BBS Usage

Legislation in 1993 moved the state's Bulletin Board System (BBS) from pilot to permanent status. The following represents usage statistics of the state's Bulletin Board System (BBS) for toll free (800) number service. As can be seen, usage tends to increase during legislative session activity.

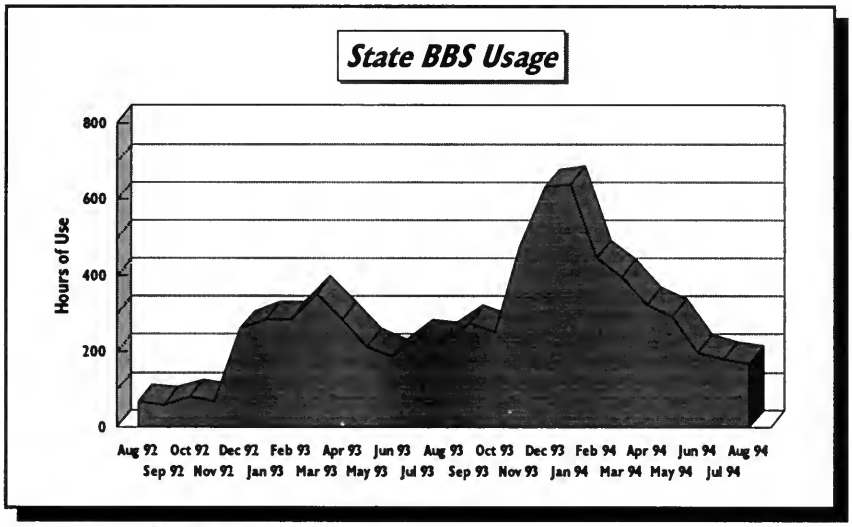


Chart 7: ***State BBS Usage***

Mainframe Rates

The following depicts the decline in mainframe rates per CPU second for agency Batch, CICS, TSO and IDMS applications for fiscal years' 1988 through 1995, and projections through the 1996-1997 biennium. Interesting to note that while rates have continued to decline, mainframe usage has grown steadily.

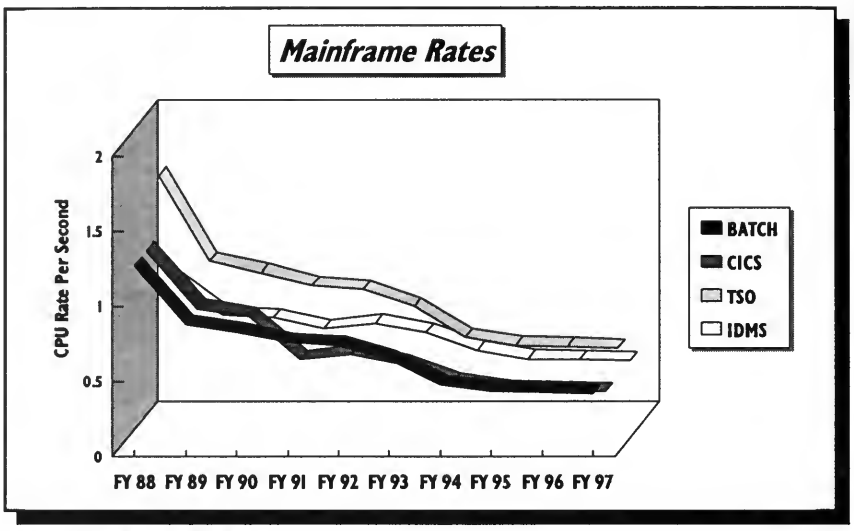


Chart 8: ***Mainframe Rates***

Mainframe Usage

This chart shows mainframe usage for agency Batch, CICS, TSO and IDMS applications for fiscal years' 1989 through 1995, and projections through the 1996-1997 biennium.

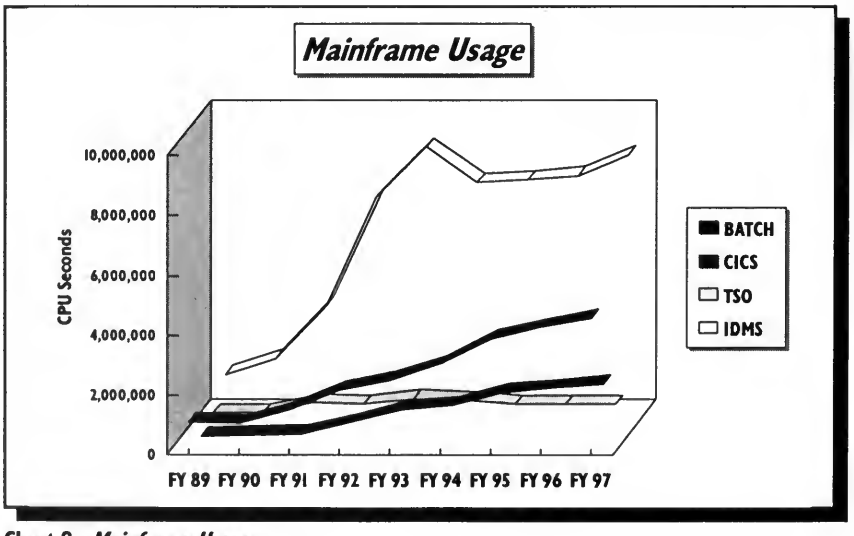


Chart 9: ***Mainframe Usage***

Long Distance Rates

This chart represents the percentage of normal tariffed rates for daytime and evening long distance from fiscal years' 1990 through 1995, and projected through the 1996-1997 biennium. In fiscal year 1990 long distance phone rates were 77% of the normal daytime rate and 65% of the normal evening rate. In August 1994, long distance phone rates have been discounted to 57% of the normal daytime rate and 52% of the normal evening rate.

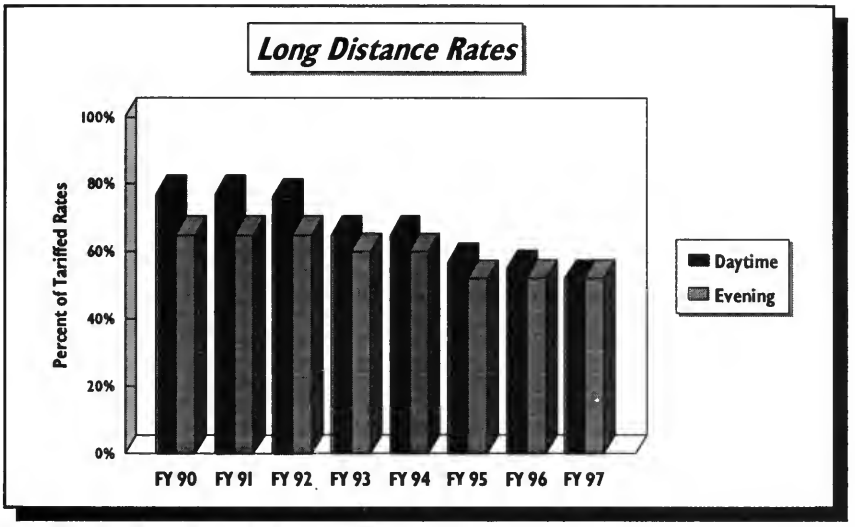


Chart 10: ***Long Distance Rates***

Long Distance Usage

This chart shows long distance usage for fiscal years' 1991 through 1995.

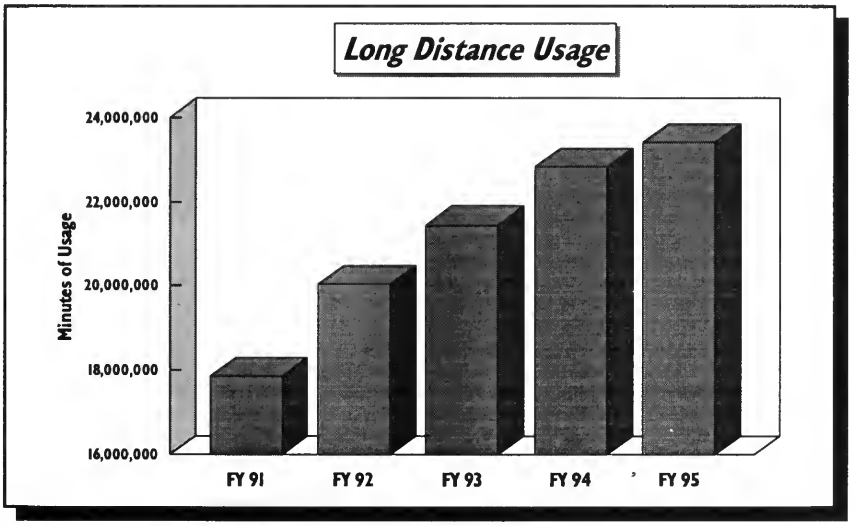


Chart 11: ***Long Distance Usage***

Application Development Emphasis

This chart represents the percentage of state agencies planning to develop projects in fiscal years 1995 through 1999 in the following application areas: Database; Imaging; Internet; Electronic Data Interchange/Electronic Benefits Transfer (EDI/EBT); Geographical Information Systems (GIS); and Video Applications.

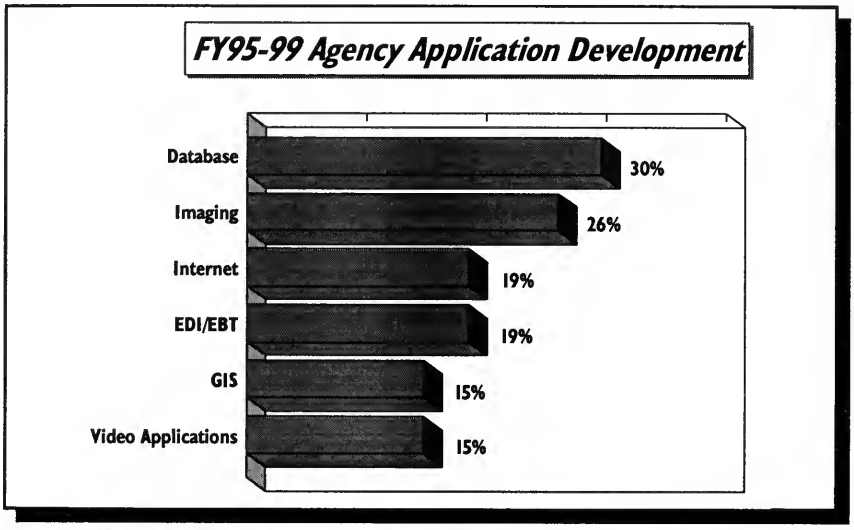
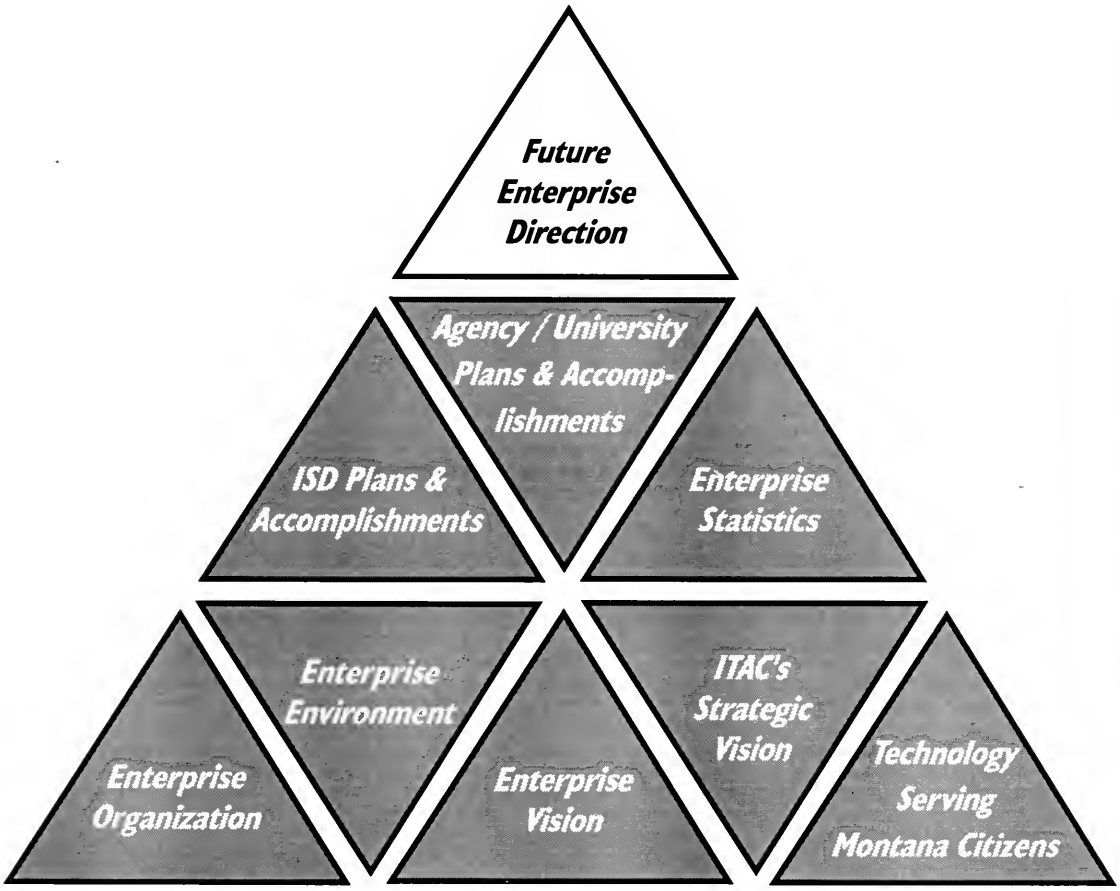


Chart 12: ***Application Development Emphasis***

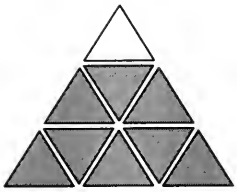
STATE OF MONTANA

1996-97 Information Technology Plan



Level 3: Enterprise Preparation for the 21st Century

LEVEL 3



ENTERPRISE PREPARATION FOR THE 21ST CENTURY

Introduction to Level 3

Level I of the *1996-97 Information Technology Plan* describes the Enterprise's Information Technology Foundation--the organization, environment, vision, strategic planning, and major applications of information technology.

Level 2 defines the Enterprise's Information Technology Plans, Accomplishments, and Statistics.

Level 3 presents "Enterprise Preparation for the 21st Century" through:

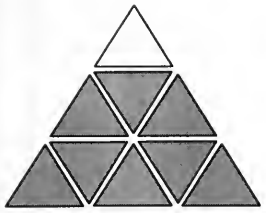
- Consolidated Agency Plans
- ITAC & ITMG Subcommittees
- ISD & Agency Exploration of Future Technology

Section 1 of Level 3, Enterprise Plans (Consolidated) summarizes and categorizes the major information technology plans existing within the enterprise. **This Section gives the legislature and public a consolidated "view" of the state's future plans for employing information technology, and defines the proposed implementation schedule and platform on which the technology will be developed.** This consolidated plan also provides ITAC, ITMG, and ISD with invaluable data on information technology trends, which can be utilized in implementing current and future strategies.

Section 2 of Level 3, ITAC & ITMG Subcommittees Projects, provides information on how ITAC, ITMG, and ISD are working together to establish statewide standards and policies.

Section 3 of Level 3, ISD and Agency Exploration of Emerging Technology, defines some of the technology that the enterprise will continue to study and promote for bringing about more efficiencies in state government.

Although Level 3 defines how the state is technologically preparing and planning for the 21st Century, it must be emphasized that these plans can only be implemented if adequate funding is available to ISD, the agencies, and the universities. If funding is not available, these plans will need to be updated and realigned appropriately.



ENTERPRISE PLANS (CONSOLIDATED)

Preface

MCA 2-17-501 explicitly mandates that the Department of Administration, in cooperation with state agencies, establish a statewide plan for the operation and development of data processing for state government.

This 1996-97 Information Technology Plan is the result of this mandate, and Section 1 of Level 3 presents a summary, categorization, and consolidation of the enterprises's plan for:

- implementing new information technology databases and systems
- redesigning or re-engineering current systems and processes
- utilizing advanced and proven technologies
- meeting federal mandates and regulations
- improving services to the public
- maintaining and expanding the current information technology infrastructure and network

An analysis of these plans reveals that 30% of the agencies will utilize information technology for database development, expansion, redesign; 26% for imaging technology; 19% for Internet access; 19% for EBI/EBT; 15% for GIS; and 15% for video applications. These percentages illustrate that ISD and the agencies are progressively planning on utilizing advanced technology for streamlining processes, offering better "customer" services, and meeting specific missions and goals.

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
Department of Administration	PAMS Improvements	Develop an on-line process to allow agencies to enter Property Accountability Management System (PAMS) documents through On-line Edit and Entry (OEE) to reduce keypunch costs for the bureau and time and postage for the agencies.	X	X			X			
	MOMS/ICC Improvements	The Accounting Bureau plans to research and determine how to put the "Montana Operations Manual Vol. II" and the "Information Control Core Index" on-line so agencies can access and retrieve accounting policy and ICC information electronically.		X	X			X		
	SBAS Improvements	The Treasury Section of the Management Support Bureau would like to automate the reconciliation to SBAS (Statewide Budgeting and Accounting System) of bank statements from the main clearing account in Helena and approximately 100 outlying banks.		X	X			X		
	PPP Improvements	The State Personnel Division is planning significant improvements to the position control portion of the Payroll/Personnel/Position Control (PPP) system and ongoing enhancement to the payroll portion of PPP.		X	X			X		
	Personnel Division Improvements	The Personnel Division has begun placing frequently used data, reports and formats on the local area network and plans for continued movement away from paper format for work products and distribution of information to agencies.		X	X				X	
	Accounting Division Improvements	The Accounting Bureau of the Accounting and Management Support Division will continue automation of the accounting process. This will include increased utilization of PC's to access the mainframe database (SBAS, PAMS, etc.).				X	X	X		
	Central Payroll Improvements/ Imaging	The Personnel Division will study potential replacement or redesign of all or part of the central payroll system and explore the use of imaging for production and storage of personnel documents and records.				X	X			X
	Interactive Video	Personnel Division plans increased use of interactive video and data for training, counseling and dispute resolution.				X	X			X
	Media Conversion	Teachers' Retirement System will convert all hardcopy, microfiche and microfilm files and reports to electronic media storage. Conversion to electronic media (CD Rom) will allow retrieval, processing and report generation within minutes.				X	X			X

Department of Agriculture	Novell Conversion	The Department will begin the conversion of our Novell LANs to Novell NetWare 4.X and will begin the process of connecting LANs to the Helena office.		X	X				X	
	Client/Server	The Department will begin the process of client/server computing with the capability of field office communication with the Helena office for on-line computing.				X	X		X	
Office of the State Auditor	Network/ Database	Implement CD-ROM Jukebox on network. Convert old system applications to FOXPRO. Investigate implementing Oracle.		X	X					X
Department of Commerce	Departmental LAN Conversion	Convert remainder of department to LAN.		X	X				X	
	Oracle Database Conversion from Informix	The Department will be replacing its Informix database during the 96-97 biennium. All Informix programs will be converted to ORACLE, the new state standard database installed. This is projected to take the full biennium and will use contracted programming services for the bulk of the conversion. The remainder of Informix to Oracle conversion will take place in the 98-99 biennium.		X	X	X	X		X	
Department of Corrections and Human Services	Oracle Database	As the SummitNet project moves forward, the underlying architecture to enable the gradual introduction of Oracle client/server technology will provide the opportunity to re-engineer and potentially redeploy RPG applications currently residing on the Department's IBM AS/400 computer. The Department will be fully involved in the move to Oracle client/server technology in the 98-99 biennium as well.		X	X	X	X		X	
	ACIS Review	The Department is conducting a review of one of its major AS/400 systems, the Adult Correctional Information System (ACIS).		X	X				X	
	MHDE Project	The Mental Health Data Enhancement project funded under a federal grant, will bring our mental health systems up to minimum federal standards for mental health data sets, and will create a Management Information System for the Montana State Hospital at Warm Springs.		X	X					X
	Interactive Video	The Department is currently evaluating the potential benefits of using interactive video (METNET) as a method to bring continuing education to staff and clients in our institutions.		X	X					X

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
Department of Family Services	CAPS Implementation	The 96-97 biennium will see the CAPS development phase completed with the implementation of CAPS in March of 1996. CAPS will operate on the state's mainframe with over 600 DFS users located in Helena and 45 county field offices. After implementation, CAPS will operate for the remainder of the biennium under the control of a Facilities Management contract currently being negotiated by DDS and BDM management.		X	X				X	
	CAPS	The 98-99 biennium will see the continued operation of CAPS. There is a great deal of interest in pursuing the possibility of upgrading CAPS to GUI screens using the PC based technology already installed in the field as a foundation for development.				X	X			X
Department of Fish, Wildlife and Parks	Kiosk Project	The Department is examining the possible use of touch screen kiosks at several sites around the state in a joint project with the state Department of Commerce. These kiosks will provide information related to state parks, fishing access sites, and recreational opportunities in Montana. Possible future uses might include issuance of non-resident fishing licenses, state park passports, camping permits and specific and localized information related to fishing.		X	X				X	
	Point-of-Sale Licensing	The Department will be examining point-of-sale licensing. This would be an on-line issuance process that would allow for the immediate capture and use of licensing data.				X	X		X	
Governor's Office	Budget Automation	Further automate the Executive Budget, Legislative Appropriation and Revenue Estimate systems. New automation will use the new Novell and Oracle state site licenses. Eventually all state agencies will be able to create and update operating plans and to electronically submit updates to revenue estimates and appropriations.		X	X	X	X		X	
Historical Society	Agency Automation	The Society will meet with Information Services Division and set up short term and long range plans to automate the needs of the Society and bring it current with Information Technology.		X	X					X
	WLN Project	The Library program, if funding is available, plans to acquire an on-line status to WLN (Western Library Network cataloging service).				X	X		X	

Historical Society	CMS Project	The Society, if funding is available needs to implement a Collection Management System in the Museum Program.				X	X		X	
	Internet Access	The Society, if funding is available, plans connection to Internet to give researchers around the country access to the Society's collection.				X	X		X	
Department of Health and Environmental Sciences	CDC Project	The Department is participating in a pilot project with the Centers for Disease Control (CDC) to collect immunization data on children two years old or younger. If the pilot is successful and the CDC provides continued funding, the system will expand to accomplish the complete project. The pilot project is scheduled to be fully operational by January 1, 1996.	X	X	X				X	
	Client/Server	The Department is embarking on a project in the Health Services area to coordinate system development projects so that more effective use of grant monies and human resources can be realized. It is hoped that such an effort will be able to take advantage of the state's new client/server database standard.		X	X				X	
	Establishment Licensure System	The Food and Consumer Safety Bureau intends to move its mainframe Establishment Licensure System to the Local Area Network. It is anticipated that this project will be completed by FY97.		X	X				X	
	APATS/On-Line Requisition System	The Central Services Division plans to implement APATS (Automated Payroll and Time-keeping System) during FY95 and FY96, in addition an on-line requisition system is planned for implementation being operational by the beginning of FY97.	X	X	X				X	
	GUI Conversion	The Department plans to convert its network system to a graphical user interface (GUI) such as Windows providing support staff levels are at a level which will allow for the additional workload.				X	X		X	
Judicial Branch	SummitNet	Continued enlargement of the current user base and utilization of statewide resources such as the State Data Network and SummitNet will be pursued to construct statewide court network links for Montana courts and nationwide information systems if funding is available.		X	X	X	X		X	
	Montana Judicial Case Management System	Development and enhancement of the present "Montana Judicial Case Management System".		X	X				X	
	Imaging	Implement imaging for the Montana Court system.				X	X			X

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
Department of Justice	CJIN and NCIC 2000	The Department will prepare Montana's Criminal Justice Information Network (CJIN) for major enhancements that are part of the FBI's upgrade of its computer system at the National Crime Information Center (NCIC 2000) in Washington, D.C. In the second year of the biennium, the Department will begin to move the CJIN software and hardware system off the mainframe at the Armory to a mid-range computer.		X	X	X	X		X	
	Networking PCs	The Department will continue to make networking PCs into Local Area Networks (LANs) a top priority during the biennium.		X	X				X	
	Gambling Control Dial-up	During the biennium, the Department proposes to implement a statewide computerized network to track video gaming revenues and tax collections from Montana's approximately 14,500 video poker and keno machines.		X	X				X	
	Imaging	The Department intends to examine the application of computerized imaging of documents to determine the best and most economical manner in which imagining technology can be used to process documents. The Motor Vehicle Division will begin a pilot project in FY 1995 to examine imaging, storage and retrieval of driver's licensing information.	X	X	X	X	X		X	
	Technology in Highway Patrol Vehicles	The Department will conduct several projects aimed at significantly enhancing the ability of the Highway Patrol to document arrests and to gain access to critical public safety information in patrol vehicles. These projects involve installing video cameras in patrol vehicles, equipping vehicles with geographical positioning devices that will aid in accurately identifying the location of the vehicle, and equipping vehicles with laptop computers that will provide access to wordprocessing and to the Criminal Justice Information Network.		X	X					X
Department of Labor	Oracle Client/Server	Legal/Centralized Services Division is developing an on-line automated purchasing system utilizing Powersoft tools with the Oracle client/server engine. The system will be deployed statewide when SummitNet connections are available to all of DLI's local offices.		X	X				X	
	EDI	The Employment Relations Division (ERD) will begin to develop a system to allow electronic reporting of claims data from Worker's Compensation insurers thru EDI (Electronic Data Interchange).		X	X				X	

Department of Labor	Client/Server	Job Service Division (JSD) will downsize mainframe applications to a mid-tier or pure client/server environment.		X	X				X	
	IVR	Unemployment Insurance Division (UID) plans to continue the enhancement of the Interactive Voice Response system. Future plans envision additional claimant inquiry options and the possibility of offering various inquiry options to enable employers to obtain information on their UI accounts.		X	X					X
	BeAR Development	UID will begin to consider plans to re-engineer or replace the aging unemployment insurance benefits system (BeAR). This plan would be dependent upon obtaining sufficient funding ($3 - $4 million, usually in the form of grants from the federal level) for a two or three year project. In the meantime, the division will need to continue to make needed programming changes on a priority basis using both the in-house programming resources and contracted services.		X	X	X	X			X
	WARP	UID will implement Phase II of WARP (Wage Automated Reporting Program) to expand the wage reporting system.		X	X					X
	Client/Server	As funding permits, the Research and Analysis Bureau of the UID plans to install two new major statistical surveying programs obtained from the Federal Bureau of Labor Statistics. These will be installed in a client/server network.		X	X				X	
	Internet	The Research and Analysis Bureau plans to establish a connection to the Internet.		X	X					X
	HERO Database	The Human Rights Commission (HRC) continues to investigate procedures to integrate the Unix HERO database into the local area network, so that staff can access case information.		X	X				X	
	Imaging	HRC wishes to explore the benefits of imaging as a file storage mechanism and achieve access to Lexis, bulletin boards and other information systems.		X	X					X
	Network Connectivity	HRC is working with the Department to connect out-stationed employees with the local area network via a remote server.		X	X				X	
	SummitNet	It is the Commissioner's goal to have a "paperless" department. This means it will be a must to have all of Local Offices and the offices here in Helena connected to the backbone via bridges and/or SummitNet before this can be a reality.				X	X		X	
	Database	Merge Job Service database with federal database (America's Job Bank) while maintaining integration with other state agencies databases.				X	X			X

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
Legislative Branch	NetWare/ Windows Conversion	Finish the conversion of the Legislative Branch to Novell NetWare 4.X and to the Windows environment.		X	X				X	
	Oracle	Convert database systems to Oracle.		X	X	X	X		X	
	MCA Conversion	Finish the conversion of Montana Code Annotated Update process to the PC Network.		X	X				X	
	Legislative Information System	Continue to work toward building an integrated Legislative Information System which combines all applicable legislative systems into one integrated information system.				X	X			X
Department of Livestock	Montana Brands System	During FY95 the Department of Livestock will begin a project to enhance the Montana Brands System. Implementation will be in FY96. During FY99, the Department will be preparing for our next rerecording of all Montana brands which occurs every ten years and is scheduled for 2001.	X	X	X	X		X		
	Novell Conversion	In FY96, the Department of Livestock will begin a testing phase of a new version of our network operating system, Novell NetWare 4.X The new version will be in production in FY97.		X	X				X	
	Internet	During FY96 and FY97, the Department of Livestock will attach to the Information Highway using the Internet.		X	X					X
	Electronic Mail	During FY96, the Department of Livestock will reach the goal of all computers running Windows and all computers having access to the state electronic mail system.		X	X					X
Department of Military Affairs	LAN Installation/ Upgrades	Install a LAN in our Disaster and Emergency Services Division and expand existing LAN in Operations and Support to other divisions. Work with ISD on installing a router. Connect existing LANS and maximize usage of our computers.		X	X	X	X		X	

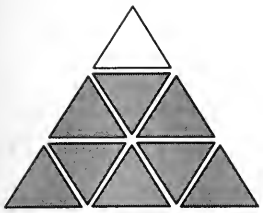
Department of Natural Resources and Conservation	Water Rights Information System	Improve access to Water Rights information thru Geographic Information System (GIS) for Reserved Water Rights Compact Commission (RWRCC) staff. Provide FTP (File Transfer Protocol) and dial-in access for non-agency clients to GIS data (spatial and documents) related to ongoing negotiations with RWRCC.		X	X				X	
	GIS	Implement the use of GIS in watershed planning and management by integrating GIS systems with digital hydrology and water quality models.		X	X					X
	Data Collection	Evaluate the use of portable PCs and portable printers with modems for use in field inspections of oil and gas activities.		X	X					X
	Imaging	Do image processing of remotely sensed data (satellite imagery) with applications for water rights, irrigation and hydrologic watershed modeling.				X	X			X
	Data Sharing	Evaluate data sharing on existing applications such as Department of Revenue's CAMAS to promote more accurate record keeping on Water Rights ownership and legal description.				X	X		X	
Office of Public Instruction	MAE-FAIRS	The Office of Public Instruction is currently implementing the Montana Automated Education Financial and Information Reporting System (MAE-FAIRS). The MAE-FAIRS system will continue to be updated with additional enhancements and the number of districts completing electronic transfers is expected to double in FY-96-97.		X	X	X	X		X	
Department of Public Service Regulation	LAN Implementation	During the 1994-95 Legislative session the Department of Public Service Regulation (Public Service Commission) received an appropriation to convert its entire computer system from a mid-range platform to a local area network (LAN), and eventually to become part of the Capitol Complex Backbone (CCB). During the FY96-97 biennium the Commission will be continuing with this project. The overall agency automation plan calls for an upgrade of Commission computer equipment, a software upgrade and data conversion from a mid-range to a personal computer platform.	X	X	X				X	
	Electronic Data Transfer	The Commission will continue to develop and expand its telecommunications capabilities, for example, with electronic transfer of data between the agency and regulated utilities.				X	X			X

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
Department of Revenue	EDI/EFT IVR	Electronic Data Interchange/Electronic Funds Transfer (EDI/EFT) for Withholding/Old Fund Liability Taxes (WH/OFLT). Interactive Voice Response (IVR) technology will also be considered as another option for employers to allow submission of withholding filings and payment through a touch tone telephone.	X	X	X	X	X	X		
	Imaging/Optical Character Recognition (OCR) System	The acquisition and installation of an Imaging/OCR System is planned.		X	X					X
	Withholding/Old Fund Liability Tax System (WH/OFLT)	Contingent upon legislative approval, the WH/OFLT System will undergo major modifications to align the Montana employer reporting periods with the federal schedule.		X	X	X	X	X		
	EDI/EFT (Individual Income Tax)	The scope of this project will expand to include a suitable means for electronic funds transfer of payments remitted by taxpayers filing a tax due individual income tax return.		X	X	X	X	X		
Secretary of State	LAN Conversion	Replace current mainframe applications with "in-house" system.		X	X	X	X		X	
Department of Social and Rehabilitation Services	TEAMS/ SEARCHS Enhancements	Enhance TEAMS (The Economic Assistance Management System) and SEARCHS (System for the Enforcement and Recovery of Child Support) to accommodate welfare reform initiatives under the Families Achieving Independence in Montana (FAIM) program.		X	X			X		
	Imaging	Evaluate imaging and voice response technology as a means of increasing productivity.		X	X	X	X			X
	EBT	Implement Electronic Benefits Transfer for the issuance of food stamp and medicaid eligibility information.		X	X					X
	Outsourced Contracts MMIS/TEAMS	Reprocure Medicaid claims processing fiscal agent contract (MMIS) and TEAMS facilities management contract.		X	X					X

Department of Social and Rehabilitation Services	Video Conferencing	Study options for application of video conferencing technology in Department to reduce travel and enhance training programs.		X	X					X
	SEARCHS	Increase efficiency of processing Child Support payments.		X	X			X		
	Downsizing	Complete the design and implementation of the client database system on the RS6000. This is the largest downsizing effort undertaken by the Department with projected savings in computer operations costs in excess of $80,000 per year.		X	X				X	
	JOBS System Redesign	Redesign the Department's Job Opportunities and Basic Skills (JOBS) system.		X	X				X	
	AFDC/EDI	Expand implementation of Electronic Benefits Transfer to AFDC (Aid to Families with Dependent Children) payments and LIEAP (Low Income Economic Assistance Program) benefits.				X	X	X		
	Client Database JOBS System Redesign	Complete and install two major client-server applications for the Department: The Client Database rewrite; the JOBS system redesign.				X	X		X	
	TCP/IP Implementation	Initiate statewide application communications utilizing TCP/IP.				X	X		X	
	Outsourced Contracts SEARCHS	Reprocure SEARCHS facilities management contract.				X	X			X
State Compensation Insurance Fund	Benefits Information System (BIS) effort.	Complete full conversion and implementation of all aspects of the integrated imaging and data systems developed under the Benefits Information System (BIS) effort.		X	X				X	
	EDI	Allow for full electronic data interchange (EDI) for medical providers billing the State Fund for services.		X	X					X
	Underwriting Business Re-engineering	Perform a business re-engineering study and a systems re-design feasibility study for the Underwriting Department, including systems design for support of integrated imaging for policy files, potential new policy retention programs, and programs to support improved customer service. Develop a comprehensive Underwriting Information System, incorporating image processing, EDI for policy application for coverage and for quarterly reporting.		X	X	X	X			X

Agency	Application	Description	Implementation Schedule					Platform Type		
			FY 95	FY 96	FY 97	FY 98	FY 99	Mainframe	Mid-Tier/PC	Other
State Compensation Insurance Fund	Expert Systems	Complete a feasibility study for use of expert systems technology for decision-making in various aspects of the business, including medical payments and underwriting. Begin work on integration of expert systems technology into existing systems.		X	X	X	X			X
	EDI/IVR	Expansion of EDI capabilities to other functional areas of the business, possible integration of voice response.				X	X			X
Department of State Lands	TLMS/FPAS	Provide continued support for the Trust Lands Marketing System and the Fire Protection Assessment System.		X	X					X
	GIS/GPS	Continue development of GIS and GPS systems.		X	X					X
State Library	Library Automation System	Purchase a library automation system and develop an automated clearinghouse which will both be accessible via the state computer network, Internet, and dial-in modems.		X	X				X	
	GIS	Expand and incorporate GIS technology into all aspects of information provision, and successfully translate the power of this technology into schools and libraries in Montana.		X	X				X	
	Circulation System Upgrade	Upgrade the automated circulation system for the Talking Book Library services via the state network.		X	X				X	
	Electronic Library	A totally electronic "library" to be available to state government and to all Montana citizens via their local libraries or via modems from their homes, which is not limited by location, hours of operation, or other such restrictions which currently exist.				X	X		X	
Department of Transportation	Metric Conversion	The Department (MDT) will continue to convert to metrics as required by the Federal Government.		X	X					X
	GIS	MDT will improve its Geographic Information System (GIS) capabilities to take advantage of this technology in meeting its business requirements.		X	X					X
	Intelligent Vehicle Highway System	MDT will work toward the implementation of an Intelligent Vehicle Highway System prototype for its Motor Carriers Division.		X	X					X

Department of Transportation	Imaging	MDT will explore opportunities to use imaging technology for very diverse activities, such as records management, records archival and retrieval and video imaging of our highway infrastructure.				X	X			X
	Information Superhighway	MDT will utilize, in conjunction with its own systems, information technology services external to the State, such as Internet and the potential benefits of the future Information Superhighway.		X	X					X



ITAC & ITMG SUBCOMMITTEES

Preface

This Section of Level 3, ITAC & ITMG Subcommittees, defines current subcommittees and past initiatives which support and promote the development and implementation of enterprise information technology plans.

ITMG Mid-tier Computing Subcommit-tee

As distributed computing becomes more prevalent in the State of Montana, guidelines for acceptable mid-tier hardware and software use must be established. An ITMG subcommittee comprised of ITAC, Lewis and Clark County, and University representation has been formed to address the issues and make recommendations on the direction for mid-tier systems in the state.

The goal of the mid-tier subcommittee is to develop a strategic, as well as tactical direction for the enterprise to provide for a homogenous computing environment. The current combination of mainframe, mid-tier, and PC platforms that exist must have the capability for growth together.

In order to fulfill the responsibility for setting direction and standards for mid-tier computing, a nine-month project researching mid-tier technology was undertaken in August, 1994.

Project objectives include the following:

- Identify how mid-tier technology can benefit the State of Montana and provide efficient and cost-effective service to enterprise.
- Identify advantages and disadvantages of mid-tier technology as it relates to ISD and Agency mission statements, strategies and plans, goals, budgets, personnel, and training.
- Define how mid-tier technology can be integrated effectively into current and proposed network and telecommunications design.
- Formulate mid-tier standards and recommendations to be considered by ITAC.
- Determine which mid-tier services should be provided by ISD.

ITMG Enterprise Software Subcommittee

The State has long embraced the concept of establishing state standards, to the extent possible, for software that is widely used across State government. This facilitates electronic sharing of information and promotes cost efficiencies in the areas of purchasing, training and technical support.

In the State's continuing movement toward a true enterprise operation, ITMG recognized that issues would arise that related to this enterprise software. This subcommittee was formed to address these issues and make recommendations back to ITMG.

The objectives of the subcommittee include:

- Identify software, hardware, and network issues and problems that relate to enterprise software.
- Draft standards and recommendations that relate to the acquisition, conversion, upgrade and distribution of enterprise software.
- Define procedures that will be used by the agencies and ISD to implement standards and recommendations.
- Define agency and ISD responsibilities as they relate to enterprise software issues.
- Coordinate the work of this subcommittee with other related subcommittee's such as Mid-tier Computing and the NetWare Manager's Group.

Several specific issues this subcommittee will deal with include :

- How should the State handle the electronic distribution of enterprise software?
- Should the State enter into site license agreements, as they did for Oracle and NetWare, for other enterprise software packages?
- On what platform(s) should enterprise software run? For example, should word processing be available on the PC platform but not the mainframe?

Dealing with the issues that relate to the management of enterprise software will be an ongoing process. The challenge is in finding ways to efficiently and effectively manage enterprise software while recognizing individual agency requirements.

ITMG Purchase and Cost Subcommittee

The state currently has in place Microcomputer Term Contracts with Dell, Digital Equipment Corporation, and IBM. These contracts were established as a result of the explosive growth in computer vendors and products, the need for the state to establish technical standards of uniformity, and to allow for data sharing.

These term contracts have served the state well for several years and are now being considered for renewal. ISD and ITMG have formed the Purchase and Cost subcommittee with the objective of evaluating the current method of procuring microcomputers and developing possible alternatives for the enterprise to procure microcomputers in the future.

ITMG Training Subcommittee

As a result of the ITAC Information Technology Strategic Plan, a subcommittee consisting of ISD, Agency and Local Government participants has been formed to work on state-wide training issues. The subcommittee plans to have the following goals completed by September, 1995:

- Definition of basic competencies in seven different areas of information technology. (The first four were specifically selected by ITAC, the second three were added by the subcommittee.) The seven areas are:

  General Personal Computing
  Wordprocessing
  Spreadsheets
  Database
  Use of a LAN
  Electronic Mail
  Communications

- Intermediate, Advanced, Expert and Support/Programming competencies in the above seven areas will be defined whenever possible.

- Sample guidelines, questions or demonstrations will be developed first in the basic competency areas. Work in the more advanced areas will follow. Individual agencies will then have the option of using them for determining staff competency based on the requirements of any specific position.

- The subcommittee will work to ensure that there is a training method or resource available to achieve certain competency levels.

- The subcommittee may also make specific recommendations to ITAC concerning implementation of use of the competency levels developed.

ITMG Database Tools Subcommittee

With the adoption of Oracle as the State's database standard, ITAC also recommended that a site license for programming tools and end-user access software be acquired (See Appendix C for ITAC Recommendations). An ITMG/ISD subcommittee is currently meeting and evaluating potential software products. The selection of a vendor is expected to be made in early 1995.

ITMG Security Subcommittee

In 1993 an ITMG subcommittee developed the Electronic Access and Controls Guidelines, which were finalized and distributed in February, 1994. These guidelines were developed from the Legislative Audit Committee's request that electronic access controls and associated risks be discussed by ITAC and ITMG.

In 1994 an ITMG subcommittee was formed to address issues regarding SummitNet and will review in general Statewide security measures and will make security recommendations pertaining to access, availability, and exchange of data; confidentiality and integrity of information; and disaster recovery procedures.

It is critical that appropriate and sufficient hardware, software, and network security be maintained and monitored continually; therefore, this topic will be addressed by ITAC, ITMG, and ISD in an on-going manner in order to guarantee that information technology security policies and procedures are updated.

ITAC/ITMG Network Funding/Cost Recovery Task Force

Issue #2 of the Funding Task Force in the 1994 Strategic Plan recommends that a task force be established to develop an alternative cost recovery model for data network funding (See Appendix C for ITAC Recommendations). ITAC, ITMG, and ISD will work together to develop recommendations and a capability to attain this model. This task force has been formed with the goal of having a model by late 1995.

ITAC/ITMG Relationship Task Force

Issue #10 of the Coordination Task Force in the 1994 Strategic Plan recommends that a task force be established to formally document the relationship that should exist between ITAC and ITMG (See Appendix C for ITAC Recommendations). The objectives of the task force are to clarify the roles of ITAC and ITMG, and to ensure the continued good communication between the two organizations. Members from ITAC, ITMG, and ISD have formed a task force with the goal of having a draft document in early 1995.

ISD & AGENCY EXPLORATION OF FUTURE TECHNOLOGY

Preface

As we approach the next century government services will become increasingly automated, resulting in a more effective and efficient means of delivery. Agencies are planning *now* to take advantage of these future technologies to provide an improved product to the people of Montana.

The Consolidated Agency and ISD plans indicate that many of the application and system development projects involve the following technologies: imaging, EBT/EDI, multimedia, document management, GIS, and video conferencing. Because of these trends, ISD and Agencies continue to study and stay abreast of technological advancements.

Presented below is a brief definition of these technologies and a summary of how some agencies are exploring emerging and advanced technology.

Imaging

Document imaging consists of the capture, processing, storage, output and retrieval of electronic images of documents. Most images are captured by scanning documents, although images can also be captured from a display screen, video recorders, and faxes.

The growth in business use of imaging has occurred because imaging files have become just another data type that is present in the desktop environment. It is now possible to use general purpose development tools to incorporate imaging directly into strategic applications. Not many years ago, imaging was a separate application that had to run on specialized equipment.

The advantages of imaging include centralization of a business's knowledge base; enterprise wide access to documents; simultaneous review of a document in multiple locations; reduced storage costs associated with paper files; increased efficiency through the elimination of the manual processes and errors associated with pulling and refiling folders; and ease of file retrieval.

One of the biggest expenses and logistical problems in implementing an imaging system is the conversion of existing documents to the new system. Aspects of imaging that need improvement before imaging becomes a ubiquitous feature in desktop applications include compression and optical character recognition technologies.

- The Department of Corrections and Human Services feels that there may be a productive use of this technology in several locations. Imaging has proven to be a viable technology in hospital environments and state medical facilities should not be an exception.

- The Department of Transportation expects to move towards imaging technologies on a case by case basis. There are plans to video tape all outdoor advertisement signs, grab a frame of the image for each sign and attach the image to the database which tracks all aspects of the signs. This will assist the Right of Way Bureau with their responsibility for managing this program. Other possible areas for imaging technologies involve scanning as built designs and other documents, and providing comprehensive electronic records management related to our completed construction projects.

- The acquisition and installation of an Imaging/Optical Character Recognition (OCR) System is planned for the next biennium in the Department of Revenue. This technology would promise to greatly reduce the manual filing, storage, and retrieval of many of the paper documents submitted to the Department. In addition, it is anticipated that this automation effort would make the current data entry for tax returns a much more efficient process. The tax processing systems will be enhanced to effectively interface with this system. An ongoing effort will be made to redesign tax forms to better lend themselves to this technology and for ease of completion by the public.

- The State Fund's benefits system will be installed in FY95-96 with the underwriting system to be developed in 97-98.

- State Lands has installed full page scanners at several of the western field offices. These devices are used to covert paper maps to digital maps which can then be edited for timber sales and firefighting.

- During the next biennium the State Library will be working with various agencies to make information they have in different formats (e.g., photographs), available for use by libraries throughout Montana. Such data would be made available in CD-ROM and perhaps on-line electronic forms.

- In January, 1995 Livestock will begin a project which has the goal to be able to display brand images on a PC. The target date for completion of the project is FY96.

- The Department of Health and Environmental Services has been exploring this technology for several applications.

- Fish, Wildlife, and Parks is exploring imaging for the storage and retrieval of license information. (If a point-of-sale system is implemented, this may become unnecessary).

- A pilot imaging project for water rights processing is being considered by the Department of Natural Resources. There may possibly be a project in the next biennium designed to capture maps and documents

related to landowner plans of water use in chronically de-watered streams and rivers.

- The integration of scanning technology into TEAMS and SEARCHS would greatly reduce data entry requirements placed on Social and Rehabilitation Services eligibility technicians and child support case workers.

- The Department of Labor has several applications suited for imaging solutions:

- The Unemployment Insurance Division is very interested in this technology and submitted an automation grant proposal in 1991 (not funded) to purchase this technology. By the year 2000, the hope is to have purchased an image based, document management system. The Unemployment Insurance Benefits Bureau processes thousands of files each year and has a need for staff to have access to the information contained within a file at the same time in order to process individual unemployment insurance claims. The Unemployment Insurance Contributions Bureau is interested in pursuing imaging (along with document management) within the next biennium. Imaging would improve operations, be of great value to field representatives, and would be a good step toward interagency consolidation and coordination.

- The Human Rights Division is exploring the benefits of using imaging as storage mechanism.

- Workers' Compensation Court is exploring imaging technology for archiving closed cases and eliminating the need to store boxes of paper files.

- Job Service Division's Alien Certification application is using imaging as the heart of the system.

The University of Montana-Missoula (UM-Missoula) has been actively discussing and evaluating imaging technology. Potential uses include student records, financial records, purchasing documents, library information.

Montana State University-Bozeman (MSU-Bozeman) is currently supporting a GIS information center.

The Montana Bureau of Mines and Geology (MBMG) at Montana Tech of The University of Montana (Montana Tech) is heavily involved in imaging and Graphic Information Systems (GIS) specifically ARC/INFO. The campus has developed a plan to implement GIS academically. The MBMG will continue to expand especially with its involvement in SUPERFUND related projects.

Distance Learning

Video conferencing combines the benefits of motion video with realtime, interactive conversations over digital telephone lines. It provides two-way, interactive audio/visual communications between people in two or more distant sites. Current Video conferencing technology encompasses a variety of applications that cover document conferencing, desktop conferencing and desktop video conferencing. Educational institutions, government agencies, and others are using Video conferencing to bring people together from distant locations without incurring the time and costs of travel.

Systems like The Montana Educational Telecommunications Network (METNET) have lead the way in enabling Montanan's to take advantage of this technology. The SummitNet network expansion plan proposes development of the State network to provide improved Video conferencing capabilities as well as Internet access.

- The Department of Corrections and Human Services is very interested in the use of METnET in at least two locations, the Montana State Prison and the Montana State Hospital. Applications involve both accreditation and client training activities. They are presently considering METnET at Warm Springs as part of a bond funded construction project related to hospital accreditation.

- The Department of Transportation plans to increase the use of interactive telecommunications capabilities as provided by METNET and FHWA region 8. Much of this use will center on educational requirements of employees.

- The Department of Revenue intends to investigate METNET as a vehicle for providing mass appraisal education to the regional office staff located in every county of the State. Additionally, this technology has the potential to provide an alternate means for conducting conferences and staff meetings.

- The Department of Social and Rehabilitation Services is evaluating video conferencing technology to reduce travel and enhance training programs.

- The Montana Law Enforcement Academy located in Bozeman is developing plans to use the METNET as part of an interactive system for delivery of law enforcement courses and training.

- The Personnel Division of the Department of Administration is interested in computer assisted learning through developed curriculum, interactive lessons and conferencing capabilities.

- The State Library has proposed a two prong project to the Budget Office. One part deals with automating conventional library activities such as the card catalog and checkout. The other aspect of the project

is to set up a server for Internet access. The State Library could then act as a clearinghouse for other libraries to access Internet.

- DNRC has initiated several projects accessing the Internet. The information available via Internet will provide a cost effective method for satisfying the departments numerous research efforts.

Distance learning activities are fundamental to UM-Missoula's basic educational mission. The University has engaged in distance learning activities for several years and plans to increase these activities substantially under the newly restructured University System. Principal activities to date have been the delivery of courses between Missoula-Billings and Missoula-Helena, with some activity also between Missoula-Great Falls and Missoula-Kalispell. Plans are underway to add distance learning capabilities at Western Montana College of The University of Montana (Western Montana College). They are under discussion for Montana Tech in Butte, UM-Missoula's Biological Station at Yellow Bay, and perhaps Flathead Valley Community College in Kalispell. Eventually, the University expects to carry out a substantial part of its educational mission through distance learning.

A high priority of College of Technology-Missoula instructional personnel for presentation of courses to outreaches of Montana. Primarily for areas not served by a College of Technology or a program unique to the College of Technology-Missoula.

Montana Tech is currently a downlink on METNET. A 2-way interactive compressed video room has been installed by TRI/Touch America in the Hennessey Building. Short term plans are to utilize this room. Long term plans are to implement an interactive video room on campus.

Big Sky Telegraph currently provides on-line courses for distance learning and offers instruction in developing and conducting on-line courses at Western Montana College.

Electronic Benefits Transfer/ Electronic Data Interchange (EBT/EDI)

State governments have known for a decade about disbursing welfare and other benefits electronically. Many believe the time is ripe for EBT that government can afford. By the end of the century, the Clinton administration envisions the creation of a national system that will lower the cost of delivering $111 billion in benefits a year, strengthen the management of programs, and reduce fraud.

In order to achieve these goals, considerable coordination will be required from state and federal agencies. Nearly half the states have begun steps to meet these ambitious national goals. At this point, the leaders are Maryland, Texas, Minnesota, Ohio and New Mexico. Others rapidly following are; Georgia, Tennessee, Alabama, Arkansas, Missouri, Kentucky, North Carolina, South Carolina, and Florida.

To encourage the use of electronic data interchange (EDI) technology in government, the National Institute of Standards and Technology (NIST) and the Office of Management and Budget (OMB) are working together to address the barriers to EDI implementation.

The National Performance Review identified hundreds of millions of dollars of potential savings from initiatives like electronic data interchange. But even after years of monthly pep talks from oversight agencies, remarkably few federal agencies have implemented EDI systems.

Much of the difficulty is that the successful EDI pioneer must overcome twin barriers of understanding the business and understanding the myriad information technologies needed to support EDI. EDI will deliver the greatest benefits only when an organization examines its business practices and works with other organizations (called trading partners) to streamline the practices of both. But because large organizations have thousands of trading partners, this communication and negotiation process soon becomes overwhelming when done on a one-to-one basis.

Electronic Funds Transfer (EFT) is currently used by several of the states financial systems for payments to individuals, transferring the payment directly into the individual's designated account. State systems that currently use this technology include: PPP, Public Employees Retirement System, Teachers Retirement System, and the Warrant system.

- The Electronic Data Interchange/Electronic Funds Transfer (EDI/EFT) for Withholding/Old Fund Liability Taxes (WH/OFLT) which has been piloted during FY95 and the EDI for Individual Income Tax (IIT) in conjunction with the Internal Revenue Service, will provide alternate sources of data capture to the current submission and data entry of those documents. It is expected that the usage will expand greatly to include electronic submission of other taxes and payments, plus interaction of field auditors with the electronic mail/calendaring systems and data stored on the Department of Revenue's Helena based networks. Investigation will also be undertaken in FY95 to determine if the Interactive Voice Response (IVR) System would be viable as another alternate method of entering tax return information and EDI transactions for the Withholding/Old Fund Liability Taxes. If feasible, this would allow business taxpayers to file a withholding return through a touch tone telephone.

- EDI is a part of the Department of Labor, Employment Relations Division's Workers' Compensation Automation Project (WCAP). Their new database system, to be implemented in July 1995, will use the EDI system to capture information about workers' compensation in Montana. Since EDI is a national standard, developed cooperatively among the states, Montana's adoption of this system simplifies reporting by insurers and also allows national comparison of the collected statistics.

Voice/Video/ Data Integration

Several technologies are clamoring for attention in the ever-crowded voice, video, and data integration high-wire act. There are several networking technologies available such as Switched 56Kb, ISDN (Integrated Services Digital Network), frame relay, the latest being ATM (Asynchronous Transfer Mode). ATM transmits data, sound, and images in small packets. The packets are coded and then zipped over the network at high speed. A switch at the other end reads and reassembles the information. The speed of an ATM switch can move 20 gigabits of data a second (approximately 1600 copies of *Moby Dick* every second). The SummitNet project will enable the state of Montana to take advantage of these kinds of technology.

One such network in North Carolina connects LANs at universities and governmental agencies. The so-called "North Carolina Information Highway" will be used for everything from video arraignment of prisoners to remote education. "Our rural areas need this technology as much as, if not more than, our urban areas," said Jane Smith Patterson, technology adviser to Governor Jim Hunt.

This kind of switching technology will provide integrated services, combining voice, video and data to user desktops in an explosive way.

- The Department of Revenue plans to use the new Interactive Voice Response (IVR) System for the 1995 Individual Income Tax filing season to allow taxpayers to enter key information and receive a voice response as to the status of their income tax refund.

- The Research and Analysis Bureau of the Department of Labor plans to move forward aggressively in the automation of survey responses and analysis. For example, enabling survey respondents to call data in and enter data directly over a touchtone phone, more communications by fax, investigating the viability of automated voice input/processing of survey data.

- The State Fund would also like to explore the use of voice response units for routine inquiries.

- The State Library's goal is to make such data available via the Internet.

This is likely to be a principal focal point at UM-Missoula's new Information Technology Resource Center. Potential uses include both teaching/learning and management/office applications. Pilot projects for integrated voice/video/data applications in the teaching environment are currently underway. Exploration of potential management/office applications is on-going.

The College of Technology-Missoula anticipates use in the instructional and academic support area in the FY97-98 timeframe.

Western Montana College plans to install interactive compressed video during FY95.

Multimedia/ KIOSKS

Microcomputers are increasingly being used for a variety of tasks beyond simple word processing and number crunching. One area of growth is multimedia technology. Multimedia implementations in the federal government is rapidly growing, encouraged by the technology thrust of the Clinton administration and the technology's potential for cutting costs and eliminating distance and language obstacles.

"Multimedia", is a grab bag word for digital media in an interactive format. To qualify as multimedia, a program, production or system must include audio and visuals - usually a mixture of text, graphics, animation or video.

The most common form of multimedia information system is the KIOSK. KIOSKS are designed to give people access to more information, in a clearer fashion, at more places and at more convenient times.

Providing service and information to the citizen ranks as a top priority in government restructuring efforts. Government has invested billions of dollars using multimedia for education and training, and more recently for public information, also called public access or point of information.

- The Department of Commerce's Travel Promotion division has installed PC's for this use but they are currently co-located with local chambers of commerce in an office setting. Future plans include kiosks. Planning is underway with other state and federal agencies to share locations and equipment.

- The Department of Corrections and Human Services will assess the potential use of this technology for probation/parole check.

- The Department of Transportation's infrastructure management systems incorporate still and video images within their database management requirements. This provides for easy retrieval of visual conditions along with traditional data based conditions of the infrastructure for support of many diverse activities such as traffic design, safety design, tort litigation needs and more.

- Although the Department of Revenue has no immediate plans for use of the kiosk technology, the Property Assessment Division intends, in FY96, to place personal computers in county office locations for use by the general public to make inquiry into property tax assessment records. This has a similar effect to the kiosk, facilitating easy and friendly access to public records and information.

- The State Library is currently working with various public and school libraries on a multi-media kiosk project.

- The Department of Labor's installed base of 13 kiosks will be expanded to 70 units by end of fiscal year. This technology will be used extensively for expanding service.

- Other agencies considering the use of multi-media and/or kiosk technologies are State Fund and The Department of Natural Resources.

Kiosk applications have been informally explored and are intended as a part of UM-Missoula's overall technology plan. Potential uses include student services applications, access to students' academic and financial records, "guide" services to campus facilities.

The College of Technology-Missoula anticipates primary use in the instructional area for training purposes.

Montana Tech is currently exploring the feasibility of implementing a Multi-Media/Distance Learning room on campus. The Chemistry Department is the driving force most interested in this technology.

Western Montana College currently has limited multi-media capabilities in one lab. They are considering making one lab strictly multi-media in the FY98-99 time frame.

MSU-Bozeman has Kiosks in place for general campus information, student registration, and grade reporting. Multi-media is under investigation.

Montana State University-Billings (MSU-Billings) has student kiosks installed in seven campus buildings for easy student access.

Document Management

The importance of documents in any organization cannot be overstated. Virtually all business activities either originate or culminate with a document and an organization's ability to manage it's documents can literally impact it's ability to be competitive.

The early days of automated document management centered on scanning documents into systems that often required proprietary hardware and software. Today's PC-based document management systems incorporate imaging, faxing, forms processing, text search/retrieval and indexing, desktop publishing (DTP), version control, archiving and optical character recognition (OCR).

Two of the biggest problems in document management today are consistency and interoperability. There has been a general lack of effective standards in this area, and there are too many proprietary products and technologies. There are few cross platform products to help bridge the gaps.

The evolving complexity of the electronic document has contributed to the proliferation of products. A document isn't just a single text file anymore, it can also include graphics, images, sound, video and database information. These different data types all have unique requirements for successful interchange.

A recent development within the industry offers hope for resolving these problems. A group comprised of leading computer manufacturers, software application and operating system developers, and major corporations is developing a specification for an enterprise document management architecture. Their goal is to develop a model that uses open application interfaces and is platform and vendor independent to provide interoperability and consistency between document repositories managed by different products across different platforms.

Document management is expected to be a large growth area in the industry in the 1990's, particularly as a client/server application.

- The Department of Transportation will implement "Print on Demand" capabilities. The key function will focus on is construction contract plan proposals. This will involve managing an assortment of electronic formats (ie. CADD design raster images, WordPerfect documents and even IBM mainframe reports which all together make up a contract proposal). With a high speed digital copier attached to the data network, the migration from traditional printing press processes to document design and document management centric processes .

- The Legislative Branch would like to install a document management system to help control the Bill and MCA process. This will probably take place in the FY 98-99 time frame.

- An Imaging/OCR System would provide the vehicle for fully automated document storage and retrieval within the Department of Revenue. It is intended at this time that all documents, including correspondence, for a particular tax type would be imaged, thereby eliminating taxpayer document file handling for data entry, audit, and collection functions.

- The State Fund will develop workflow systems to support management of imaged documents. State Fund will also explore the area of "expert systems". They have already contracted for one to determine case reserves, however there are many possibilities for improved decision-making and improved accuracies through the use of expert systems in the workers compensation insurer's environment.

- The Department of Administration's Personnel Division is interested in new technologies for the storage and retrieval of a wide variety of documents, forms and information including personnel policies, personnel files, position records, case records, findings and

interpretations.

- The Department of Labor's Unemployment Insurance Division views document management/workflow management software as the real benefit of a image based system. Managing the thousands of pieces of paper to insure each is correctly filed or delivered to the correct staff for timely action is a logistical nightmare and creates tremendous storage problems.

Document management applications have been discussed at UM-Missoula in conjunction with imaging applications. Potential uses include student records, financial records, purchasing documents, library information.

MSU-Bozeman is investigating several applications - potential implementation 96-97 timeframe.

Data Collection Systems

The myriad data collection systems continues to grow by leaps and bounds, limited only by the applications that can be developed for these systems. There are several common, but taken for granted technologies used by practically everyone on a daily basis that new applications are being developed for.

An increasing number of uses are being found for bar code technology. Although bar code applications are hardly in their infancy, they have not been as pervasive as originally predicted to be. Probably, the largest investment in barcode technology is occurring in the US Postal Service (USPS). The USPS plans to invest $3.6 billion over the next four years to completely automate mail processing. The system is expected to save the USPS $1 billion a year by 1998 and will eliminate 24,000 jobs.

During Operation Desert Storm, tank commanders had a high-tech weapon that worked flawlessly in the Defense Department's Global Positioning Satellite (GPS) network. The GPS network allows us all to figure out precisely where we are anywhere on earth. The GPS will eventually consist of a constellation of 21 satellites orbiting the earth at 10,900 miles, which will circle the earth twice a day. The US Government is investing over $10 billion to build and maintain the system. Applications are almost limitless: Delivery vehicles will be able to pinpoint destinations. Emergency vehicles will be more prompt. Cars will have electronic maps that will instantly show us the way to any destination. Planes will be able to land in zero visibility.

Point of sale (POS) systems provide effective collection and analysis of data by capturing data at the time and place of sale. POS systems use personal computers or specialized terminals that are combined with cash registers, optical scanners for reading product tags, and/or magnetic stripe readers for reading credit cards. POS systems may be online to a central computer for checking and updating, or they may be stand-alone machines that store the

daily transactions until they can be delivered or transmitted to the main computer for processing.

Remote types of data collection system options include telephone, dial-in, leased line, cellular, radio, microwave, and satellite. Several agencies currently use dial-in access for data collection and plan to expand the use of this technology and the development of others.

- The Department of Corrections and Human Services is considering the use of bar coding technology in the area of inventory management.

- The Department of Transportation has implemented bar coding scanners in the past and will be upgrading these capabilities in the coming biennium. In addition, DOT has implemented forms scanning equipment and will continue to improve the utilization of this technology where it makes the most sense. Global Positioning System (GPS) data collectors have been procured for collecting survey information, and there are plans to expand this technology for many other data collection activities as well.

- An Imaging/OCR System would facilitate collection of Individual Income Tax data for the Department of Revenue's entry into the current tax processing system, with the intention that the use of this technology be expanded over time to include other taxes such as Withholding/Old Fund Liability Tax (WH/OFLT) where a large volume of data is captured for processing.

- Another instance would be electronic data collection from the various transportation and utility entities from which the Public Service Commission regulates.

- The Department of Fish Wildlife and Parks is planning a point of sale (POS) system for licenses. Expected implementation around 2000.

- The Research and Analysis Bureau of the Department of Labor's Unemployment Insurance Division plans to move forward aggressively in the automation of the survey and analysis process. For example, interactive voice response (IVR) technology would allow the automated voice input/processing of survey data.

- The Department of Labor's Unemployment Insurance Division's Wage Automated Reporting Program (WARP) allows employers to submit their quarterly wage reports by modem instead of mailing in a paper document or a diskette containing their report. The data will be placed in a temporary file while staff check for errors prior to the data being uploaded into the tax system. Preliminary discussions with various employer groups indicate a high degree of acceptance. The project is completed and will be offered to employers in time to file their

quarterly reports in October 1994. A second phase is being considered and will depend upon the availability of funding (see FY96-97 plans).

- State Fund is re-engineering all data systems into a client-server environment during 96-97.

- The Department of Labor - Job Service Division is studying the integration of data collection systems with other agencies.

- The Department of Corrections and Human Services is investigating a computer based Inmate Tracking System. Inmates and staff would have a wristlet which would enable security staff to know where they are at all time. The computer would monitor, and would know where each inmate is authorized to be and with whom. The computer would notify staff if an inmate is in an unauthorized area or with unauthorized inmates/staff.

- The Department of Natural Resources and Conservation (DNRC) will evaluate the use of CD Rom instead of Microfilm and hard copy reports in Regional offices.

Data collection systems have been informally discussed at UM-Missoula. Potential uses include research applications, student services applications, physical plant operation applications, etc.

MSU-Bozeman is in the process of acquiring a network data management system.

MSU-Billings is beta testing a bar coding system for PAMS inventory management.

Mobile Computing

The traditional workplace where an employee spends the entire working day in the company's offices is changing. More and more people either work out of their home or other off-site locations. With this shift, has come the growth of a class of computers that are portable, thus enabling their use anywhere. These include notebooks, subnotebooks, pen based, palmtops, and handhelds or personal digital assistants (PDA). These devices can also easily be connected to existing networks for accessing, downloading or uploading information. While notebooks and subnotebooks are well established in the marketplace, PDA's are expected by many to be the next great growth area in the industry.

Many users think PDAs should perform as a downsized personal computer and expect all of the functionality of the PC. If these devices are to gain mass acceptance in the marketplace, then they will likely have to perform in that manner. The ability to provide PC functionality in a handheld device is still several years away.

- The Department of Agriculture is interested in the ability to do E-mail and file transfers for personnel on the road or in the field.
- The GPS systems are a form of mobile computing. For example, Department of Transportation data can be collected as employees drive along the highways.
- State Fund will expand the use of lap-top computers to improve efficiencies and data availability to field staff.
- Livestock is planning to purchase mobile units for some of their field people (milk & egg sanitarians) in FY97.
- The use of GPS and mobile computing has potential in many areas such as Water Rights, Oil and Gas, Facility Siting, GIS, for the Department of Natural Resources and Conservation.

Western Montana College uses laptop computers in student teaching, and in several grant projects, including Reach for the Sky, Tech Prep and SIMMS. Activity in this area should remain constant over the next several years.

Wireless LANS

This term is used for Local Area Networks (LANs) that operate without the traditional cabling method for transporting data. Data is transmitted via either radio waves or infrared light waves.

Some of the advantages of wireless LANs address the shortcomings of cabled LANs. It can be difficult and expensive to install or change cabling, particularly in older buildings. Wireless LANs are also more likely to meet future demands for high bandwidth data communications. The shortcomings of some specific wireless technologies are line of sight requirements, building structural signal blockages, range limitations and interference problems.

- This technology will be considered for Department of Transportation's smaller field offices in the coming biennium.

Wireless LANS have been actively discussed and explored at UM-Missoula. Potential uses include, providing data communications in situations where permanent wiring is either not cost-effective or may not be feasible.

The College of Technology-Missoula anticipates using wireless technology for a West Campus application in fiscal years 97-98.

Montana Tech has electronically connected its South Campus (College of Technology-Butte) to the main campus utilizing this technology. Plans are to expand this networking technology to several other remote locations during this academic year.

MSU-Billings is installing a wireless LAN in the school library.

Dial-In Access to LANS

UM-Missoula presently provides dial-up access to its campus network facilities for University students, faculty, and staff. One University of Montana facility, Big Sky Telegraph at Western Montana College, provides state-wide dial-up access to bulletin board services for K-12 teachers and others. Discussing the expansion of access to local, regional, and state-wide UM and University System facilities.

Western Montana College provides 6 dial-in modems with access to the campus network. Dial-in access to Big Sky Telegraph, METNET, and other electronic bulletin board systems is available.

Protocol Gateways

UM-Missoula currently uses a variety of protocol gateways in its campus network. These include DECNET to TCP/IP, NetWare (IPX) to IP and AppleTalk to IP. We expect to standardize all data communications at UM to use TCP/IP.

College of Technology-Missoula utilizes UNIX to NetWare primarily for instructional purposes in the Microcomputer Technology and Electronics areas.

MSU-Bozeman currently has in service DECNET to IP gateways at various locations on campus.

MSU-Billings utilizes Pathworks for the School of Business.

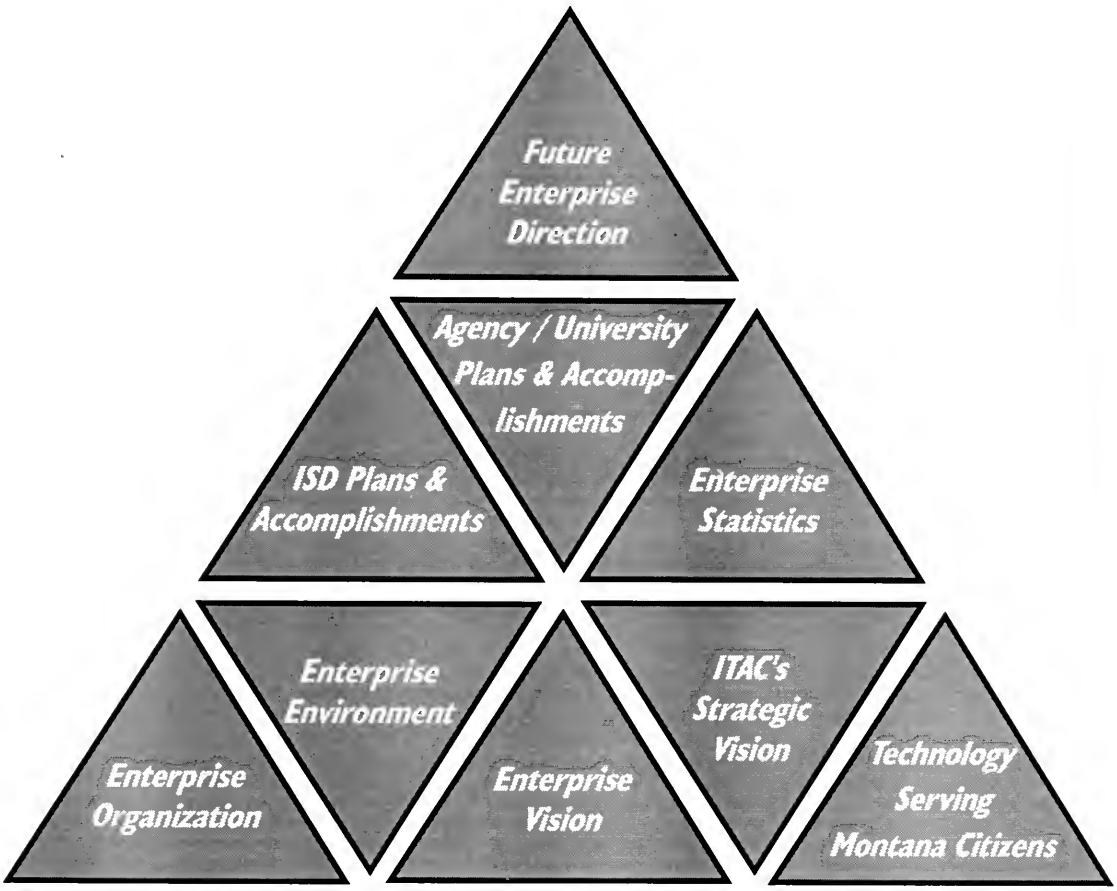
GIS (Geographic Information Systems)

GIS applications involve the storage and manipulation of electronic maps and related data. The raw input for the electronic maps often comes from satellite photographs. GIS products generally link two separate databases. One database contains the spatial reasoning and presentation component, which consists of the lines, points, and polygons that comprise maps. The other database contains the data attributes component, which consists of information related to the maps, such as contour intervals or population densities. ARC/INFO is the GIS software that is most widely used in State government today, and it's primary use is for environmental and resource management. The potential uses of GIS in governmental operations are enormous. It can automate and standardize state data on roads, environment, maintenance, assessment, industry, population, planning, and growth, which will potentially result in new efficiencies in these areas.

The ORACLE database, which the State recently acquired, can also function as the data attribute component of GIS applications. The ORACLE database advantages of wide accessibility and performance in client/server applications are expected to facilitate the sharing of GIS applications across State government and with the general public.

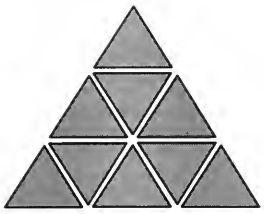
STATE OF MONTANA

1996-97 Information Technology Plan



Appendices

APPENDICES



STATUTES

Montana Code Annotated

The Montana Code Annotated (MCA), section 2-17-501 defines the responsibilities of the Department of Administration, Information Services Division, in the delivery of information technology services to state government.

MCA 2-17-501

Responsibilities of the Director of Department of Administration for data processing.

(1) Except as provided in subsection (2), the director of the department of administration, in cooperation with state agencies, shall:

(a) establish policies and a statewide plan for the operation and development of data processing for state government;

(b) review and approve agency specifications and procurement methods for the acquisition of data processing equipment;

(c) review and approve agency specifications and procurement methods for the acquisition of software to ensure network compatibility and conformity with the statewide data processing plan;

(d) review and approve all contracts for private sector data processing services to ensure conformance with the statewide data processing plan and statewide data network; and

(e) operate and maintain a central computer center and a statewide data network for the use of all state agencies and political subdivisions.

(2) (a) The responsibilities of the director under subsections (1)(b) through (1)(d) do not apply to the Montana university system or to the office of the superintendent of public instruction. The university system and the office of the superintendent of public instruction are exempt from the requirements of subsections (1)(b) through (1)(d) unless a data processing activity proposed by the university system or the office of the superintendent of public instruction affects the operation of the central computer center or the statewide data network. If the university system or the office of the superintendent of public instruction determines that the central computer center or the statewide data network will be affected by the proposed activity, the agency shall notify the director and the proposed activity is subject to the requirements of subsections (1)(b) through (1)(d).
(b) For purposes of subsection (2)(a), a data processing activity affects the operation of the central computer center or the statewide data network if it adds to the processing workload, capacity, or support service requirements of the central computer center or the statewide data network.

(3) When reviewing data processing activities submitted by the university system or the office of the superintendent of public instruction under subsections (1)(b) through (1)(d), the department shall consider and make reasonable allowances for the unique educational needs and characteristics of the university system and the office of the superintendent of public instruction to communicate and share data with units of the university system and with school districts.

(4) As used in subsections (1) and (2), the following definitions apply:
(a) "Central computer center" means any:
(i) shared or sharable computer system and facilities provided by the department for use by government agencies; or
(ii) computer operations and software development support services provided by the department.
(b) "Statewide data network" means any telecommunications facility, circuits, equipment, or software administered by the department for the transmission of data from one computer to another by government agencies.

(2) set priorities for the development and acquisition of data processing systems;

1994 MCA -- Special Session Edition 2-17-503

Security responsibilities the of Department of Administration. The Department of Administration is responsible for providing centralized management and coordination of state policies for security of data and information technology resources and shall:

(1) establish and maintain the minimum security standards and policies to implement 2-15-114, including the physical security of central and backup computer facilities consistent with these standards;

(2) establish guidelines to assist agencies in identifying electronic data processing personnel occupying positions of special trust or responsibility or sensitive locations;

(3) establish standards and policies for the exchange of data between data centers or departments by hardwired or nondedicated telecommunications to ensure that exchanges do not jeopardize data security and confidentiality;

(4) coordinate and provide for a training program regarding security of data and information technology resources to serve governmental technical and managerial needs;

(5) include appropriate security requirements in the specifications for solicitation of state contracts for procuring data and information technology resources; and

(6) upon request, provide technical and managerial assistance relating to the security program.

(a) data showing the average salaries paid to employees in Montana's labor market for comparable positions;

1994 MCA -- Special Session Edition 2-17-301

Supervision of mailing, duplicating, copying, and telephone facilities.

(1) The department of administration shall maintain and supervise any central mailing, messenger service, duplicating, and copying facilities for state agencies in the capitol area.

(2) The department shall maintain and supervise any central telephone switchboard for state agencies located in Helena.

(3) Cost records shall be maintained and agencies shall be billed for services received.

1994 MCA -- Special Session Edition 2-17-302

Communication systems.

(1) The department of administration shall:
(a) provide communication services to all agencies of state government. The state communications system must be capable of passing voice, video, data, written information, and other forms of communication to and from distant points.
(b) exercise general supervision over all existing communications systems for all agencies of state government;
(c) plan, review, and approve any additional installations of communications equipment and systems for all agencies of state government, including mail equipment for state agencies within a 10-mile radius of the capitol area. In approving the installation of additional communications equipment or systems, the department shall first consult with and consider the recommendations and advice of the executive heads of the various state agencies.
(d) approve standards and procedures for selection, acquisition, and operation of communications equipment;
(e) ensure that all communications equipment is properly maintained. The department is authorized to establish a centralized maintenance program for all state communications equipment and to contract the equipment maintenance if it is in the state's best interest. The department shall maintain cost records and bill agencies for services rendered.
(f) provide assistance to the legislature, governor, and state agencies relative to state and interstate communication matters;
(g) provide a means whereby political subdivisions of the state may utilize the state communications system, upon terms and under conditions as the department may establish;

(h) accept federal funds granted by congress or by executive order for any purposes of this section, as well as gifts and donations from individuals and private organizations or foundations;
(i) foster the development of new and innovative communications systems and techniques within the state, including but not limited to satellite communications and high-speed, high-density data transfer. To carry out the purposes of this section, the department may contract with qualified private organizations, foundations, or individuals if it is in the state's best interest.
(j) pay for and allocate to state agencies, as part of services rendered, the cost of any performance audit of the state communications system performed by or at the direction of the legislative auditor.

(2) The department may provide assistance to political subdivisions or nonprofit organizations, upon terms that the department may establish, relative to state and interstate communications systems and techniques.

(3) Adequate rules for the use of any communications equipment and facilities must be adopted by the:
(a) department for executive branch agencies;
(b) supreme court for judicial branch agencies; and
(c) legislature by joint rule for members of the legislature and legislative branch agencies

Montana Operations Manual (MOM)

The Department of Administration develops policies and procedures to guide the use of information resources and systems by providing minimum standards for the planning, acquisition, development, security and disposal of automated information systems. These policies and procedures are documented in the Montana Operations Manual and in the Administrative Rules of Montana. The following provides a summary of these policies and procedures:

MOM documents Automated Information Systems policies and procedures to be followed by all state agencies, except the Montana university system and the Office of Public Instruction. The following summarizes these policies:

A. Control and coordination 1-0210.00

1. The Department of Administration will insure conformity with the statewide data processing plan and network compatibility by establishing policies, reviewing and approving agency specifications and procurement methods for data processing equipment, reviewing and approving all contracts for private sector data processing services, and operating and maintaining a central computer center.

2. The Department of Administration will coordinate the Information Technology Advisory Council whose mission is to improve the

effectiveness of agency operations and state government as a whole through the appropriate use of computers and information processing technology.

B. Information system planning 1-0220.00

1. Agencies should adopt formal planning and review processes for information systems environments.

C. Information system acquisition 1-0230.00

1. All computer hardware and software procurement shall comply statute which governs the procurement of supplies and services.

2. Agencies should develop an information system needs analysis to review data and information management issues, communications, compatibility and software requirements, when planning major improvements to their information systems.

3. Specifications for procurement of hardware and software scold clearly define the unique requirements of the agency without being unduly restrictive.

4. Agencies should evaluate the available financing alternatives for data processing and office automation equipment, select the most cost/-beneficial method, or justify, in writing, the use of another alternative.

5. Agencies should obtain written approval from the Information Services Division prior to procurement of computers and related hardware and for bids and contracts for private data processing services.

6. Department of Administration will select and support equipment and software for inclusion under term contracts and require term contract items to be compatible with the state's compatibility standards.

D. Software acquisition considerations 1-0232.00

1. Agencies shall maintain policies and procedures for planning and managing information systems development projects. Software may be procured from a vendor or developed by staff personnel, private sector consultants, or Information Services Division. Planning and managing systems development projects should include the following considerations:

a. Information systems should be designed so that data can be shared. Interdepartmental sharing should be considered when developing systems.

b. Although the names of the components may vary, design and development methods should consist of phases and tasks, documentation, and approval points.

c. Software design should describe how the system will implement industry recognized controls.

d. Application specific software should include adequate documentation.

e. Agencies should establish a policy which defines the documentation necessary for changes to production systems.

f. Systems development projects should include consideration for the acquisition of existing software as an alternative to custom written software.

2. Data processing services procurements should adhere to Management Memo I-88-4-6 which defines selection and use of consulting services.

3. All purchased software is subject to the Copyright Act of 1976 and the software amendments of 1980 unless otherwise indicated. Each agency should ensure that proprietary software copyright laws are not being violated as a result of an agency's use of that software.

4. The Department of Administration will provide agencies with support for data processing and office automation software. Emphasis will be placed on support for products that are compatible with the direction of the state communications network. Each software product supported by ISD has been assigned on of four support levels: full; limited; sunset; special case. (Supported products are listed in Appendix B: Computing Environment and Network).

E. Communication Acquisition Considerations 1-0232.00

1. The following standards for hardware and software procurement must be met for use of the state's telecommunication network.

a. The primary standard used by the state of Montana for distribution of electronic information is IBM Systems Network Architecture (SNA).

b. Data may be transmitted via the network provided it conforms to either Synchronous Data Link Control (SNA/SDLC) or Token Ring (IEEE 802.5) protocols.

c. Network nodes (devices) should be capable of functioning as a physical unit type 2.1.

d. LU 6.2 protocols or Advanced Program to Program Communications (APPC) are used to establish communicating sessions.

2. Local Area Networks (LAN's) will be managed as an integral part of the statewide telecommunications network. The standard LAN topology is Token Ring (ie, international standard IEEE 802.5).

a. ISD will purchase and install Token Ring hardware and software components;

b. ISD will provide technical staff to assist agencies with LAN implementation and ongoing changes to the LAN configuration.

c. ISD will provide problem tracking and resolution services designed to maximize the availability and performance of the LAN to the user agency;

3. Private data networks established for the exclusive use of an agency will not be approved when the routing of the desired service duplicates a capability available on the central facility.

F. Contingency Planning for Information Systems 1-0240.00

1. Agencies shall maintain contingency plans for all information processing centers which support essential functions and critical applications.

2. ISD will establish and maintain a disaster contingency plan for the central computer facility.

G. Information system security 1-0250.00

1. Agencies shall implement security measures for the protection of their data and information technology resources.

2. Agencies shall authorize access to their information technology resources by designating certain persons as users and authorizing such persons to access these resources in the manner necessary for performing their duties.

3. The Department of Administration to will allow the general public to access the state telecommunications network and the central computer providing access systems conform to established guidelines.

H. Disposal of information systems 1-0260.00

1. Any system that is no longer needed by an agency should be removed in its entirety from the computer upon which it resides.

Administrative Rules of Montana (ARM)

ARM documents policy governing acquisition and use of telecommunications systems. The Department of Administration must approve the installation, modification, or removal of all telecommunication systems.

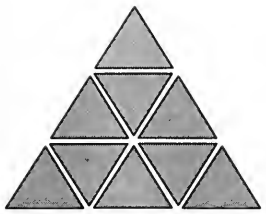
A. The state's telecommunications facilities are provided principally for the conduct of state business.

B. State agencies are individually responsible for enforcing the state's telecommunication systems rules and cost incurred for use of the systems.

C. The state telecommunication systems are available for use by political subdivisions of the state, subject to authorization by the department of administration based on formal written request by the subdivision.

D. The state telecommunication systems are available for use by in-state, non-profit organizations which meet specified criteria.

E. All records of use of telecommunication systems are public documents and subject to review by the public, unless protected by statute.



COMPUTING ENVIRONMENT AND NETWORK

PC Supported Software

Revised 03/25/94
HB99
Implementation
Attachment A

ISD SUPPORTED SOFTWARE				
Category	*Software*	*Version*	*Date of Support*	*Comments*
Communication	Xtalk XVI	3.71B		
	Xtalk	Win 2.0	Apr 1993	
Database	dBASE III+	1.1	Feb 1987	Limited support
	Oracle	TBA	TBA	
	PFS	2.0	Jul 1989	
	R:Base	3.1C	Jan 1991	
	R:Base	4.0		Pending database directions
	R:Base compiler	2.11		Limited support
	SAS	6.07	Mar 1993	
	SAS (PC)	6.04		
	SAS (PC)	Win 6.08		
Drawing	Corel Draw	3.0	Apr 1993	Limited support
	Corel Draw	4.0	Aug 1993	Limited support
	Freelance	3.01	Dec 1990	
	Freelance	Win 2.0	Apr 1993	
Electronic Mail/ Calanders	ZIP!Mail	1.23	Apr 1991	
	ZIP!Office	1.25		
	EMC2/TAO	3.03	Apr 1991	
	EMC2/PCLink	356	Apr 1991	
	Personal EMC2/TAO	226204A	Dec 1993	
	PM			
Emulation	Extra!	1.42		
	Extra! Extended	2.23		
	Extra!	Win 3.3		
	Extra!	Win 3.4		
File Transfer	Assist/Vision	1.2	Apr 1993	
GUI	Windows	3.1	Jul 1992	
Operating System	DOS	3.3		
	DOS	4.01		
	DOS	5.0		
	DOS	6.0		

Category	*Software*	*Version*	*Date of Support*	*Comments*
Operating System (continued)	DOS	6.2		
	NetWare	3.11		
	NetWare	4.X		Purchased via Master License Agreement with Novell
Online Documentation and Help	Assist/Vision	2.1	Apr 1993	
	IBM Library Reader	1.2	Apr 1993	
Project Management	Project Workbench		Jul 1992	Limited support
Spreadsheet	Lotus 1-2-3	2.3	Aug 1991	
	Lotus 1-2-3	2.4	Sep 1992	
	Lotus 1-2-3	3.1	May 1991	
	Lotus 1-2-3	3.1+	Sep 1992	
	Lotus 1-2-3	3.4	Apr 1993	
	Lotus 1-2-3	Win 1.1	Mar 1993	
	Lotus 1-2-3	Win 4.0		
Virus Protection	McAffee Viruscan	106.0	Apr 1991	
	SiteLoc			
Word Processing	WordPerfect	5.1	Aug 1990	Latest program 3/09/92, Latest printer drivers 2/12/93
	WordPerfect	Win 5.2	Jul 1993	
	WordPerfect	6.0	Nov 1993	
Special Cases	Library Reader	1.2	Apr 1993	
	Panlink	3.2	Dec 1988	
	Panlink	3.2C	Oct 1991	
	Clipper			ISD/SSB
	Designer			ISD/TNB
	IDMS/Architect	1.01		ISD/SSB
	IDMS/PC			ISD/SSB
	R:Tools			ISD/SSB
	R:Scope			ISD/SSB
	SCSI Express			
	SiteLoc			
	SPF/PC	2.1		ISD/SSB
	SPF/PC	3.0	Aug 1993	ISD/SSB
	Visio			ISD/SSB

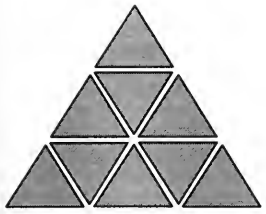
Mainframe Supported Software

MAINFRAME SOFTWARE PRODUCTS			
Product Name	***Product ID***	***Current Level***	***Vendor***
ACF/2		5.1.0	COMPUTER ASSOCIATES
ALPHA SEARCH	5736-N14	2.1.1	IBM
ALTER		REL 26	DATA RETRIEVAL
ASSEMBLER H (V2)	5668-962	2.1.0	IBM
BASIC/VS	5748-XX1	1.0	IBM
BMS/GT		5.6.1	GT SOFTWARE
BTAM/SP	5665-279	1.1.0	IBM
CA OPTIMIZER		5.1	COMPUTER ASSOCIATES
CA OPTIMIZER II		1.1	COMPUTER ASSOCIATES
CA-1 (TMS)		4.8	COMPUTER ASSOCIATES
CICS	5740-XX1/B	1.6.0	IBM
CICS	5740-XX1/E	1.7.0	IBM
CICS	5665-403	2.1.0	IBM
CICS EYEWITNESS		2.1	LANDMARK
CICS MONITOR, THE		8.1	LANDMARK
CL-SUPERSESSION		145	CANDLE
CMF (MVS/XA)		2.1.0	BOOLE AND BABBAGE
COBOL OS/VS	5740-CB1	1.2.4	IBM
COBOL II	5668-958/C	1.3.2	IBM
COBOL REPORT WRTR	5798-DYR	2.0	IBM
COMPAREX		7.1.1	STERLING SOFTWARE
CSP/AD	5668-813	3.3.0	IBM
CSP/AD PWS 6171	5668-813	3.3.0	IBM
CSP/AE	5668-814	3.3.0	IBM
CTOP		6.3.0	H & W SOFTWARE
DBA TOOLKIT		5.1	DBMS INC

Product Name	Product ID	Current Level	Vendor
DEV TOOLKIT		3.0	DBMS INC
DCF/BASE	5748-XX9	1.3.2	IBM
DCF/TSO FEATURE	5748-XX9	1.3.2	IBM
DFP/XA	5665-XA3	3.3.0	IBM
DISOSS	5665-290	3.4.0	IBM
DMS/OS		8.1	STERLING SOFTWARE
DSF (XA)	5655-257	1.13	IBM
DYL-DOC		3.2	DYLAKOR
DYL-SORT			DYLAKOR
DYL-250			DYLAKOR
DYL-260		9.1	DYLAKOR
EASYPROCLIB		2.08	COMPUTER ASSOCIATES
EMC2/TAO		3.2.1	FISCHER INTERNATIONAL
EP 3725	5735-XXB	3.0	IBM
EP 3725/3720	5735-XXB	4.0	IBM
EREP	5658-260	3.5.0	IBM
FDR		5.1-15	INNOVATION
FORTRAN/VS	5748-F03	1.4.0	IBM
GDDM/IVU	5668-723	1.1.1	IBM
GDDM/MVS	5665-356	2.3.0	IBM
GDDM/MVS/PCLKF	5665-356	2.3.0	IBM
GDDM/PGF	5668-812	2.1.1	IBM
GENX			THE A TEAM
HCF (V2)	5668-985	2.1.0	IBM
IDMS/ADS-0		10.2	COMPUTER ASSOCIATES
IDMS/ARCHITECH		10.2	COMPUTER ASSOCIATES
IDMS/CULPRIT		10.2	COMPUTER ASSOCIATES
IDMS/CV		10.2	COMPUTER ASSOCIATES
IDMS/CV MONITOR		10.2	COMPUTER ASSOCIATES

Product Name	*Product ID*	*Current Level*	*Vendor*
IDMS/DB		10.2	COMPUTER ASSOCIATES
IDMS/DC		10.2	COMPUTER ASSOCIATES
IDMS/DMLO		10.2	COMPUTER ASSOCIATES
IDMS/ENTERPRISE		10.2	COMPUTER ASSOCIATES
IDMS/IDD		10.2	COMPUTER ASSOCIATES
IDMS/IDD-0		10.2	COMPUTER ASSOCIATES
IDMS/OLM		10.2	COMPUTER ASSOCIATES
IDMS/OLQ		10.2	COMPUTER ASSOCIATES
IDMS/PERF MON		10.2	COMPUTER ASSOCIATES
IDMS/R		10.2	COMPUTER ASSOCIATES
IDMS/TCF		10.2	COMPUTER ASSOCIATES
IDMS/UCF		10.2	COMPUTER ASSOCIATES
INFO/MGMT	5665-383	3.1.0	IBM
INFO/SYS	5665-384	3.1.0	IBM
INTERTEST		4.1.0	ONLINE SOFTWARE
ISPF/DM	5685-054	3.2.0	IBM
ISPF/PDF	5665-402	3.2.0	IBM
JES2	5695-047	4.2.0	IBM
LISTCAT PLUS		6.5	MAC KINNEY
MARK IV		9.0	STERLING SOFTWARE
MVS/ESA	5695-047	4.2.0	IBM
NCP (ACF) V4	5668-854	4.1.0	IBM
NCP (ACF) V5	5668-738	5.1.0	IBM
NETMON	5796-PPB	2.0	IBM
NETSPY			LEGENT
NETVIEW	5685-111	2.1.0	IBM
OGL	5688-191	1.1.0	IBM
OPTIMIZER II		1.1	COMPUTER ASSOCIATES
PANLINK		3.2	PANSOPHIC

Product Name	*Product ID*	*Current Level*	*Vendor*
PANVALET		14.2	PANSOPHIC
PAN/TSO		14.1	PANSOPHIC
PAN/ISPF		14.1B	PANSOPHIC
PC XFER (3270)	5665-311	1.1.1	IBM
PL/I	5734-PL3	1.5.1	IBM
PM	5798-DQJ	1.4	IBM
PPFA	5688-190	1.1.0	IBM
PSF	5695-040	2.1.0	IBM
PVS	5744-BZ3	1.2	IBM
RESOLVE PLUS (XA)		3.0.0	BOOLE & BABBAGE
SAS BASE		5.18	SAS
SAS ETS		5.18	SAS
SAS FSP		5.18	SAS
SAS ACCESS IDMS		1.1.2	SAS
SDSF	5665-488	1.3.2	IBM
SMP-E	5668-949	1.6.0	IBM
SPSS		9.1	SPSS
SSP	5665-338	3.5.0	IBM
SYNCSORT		3.3CR	SYNCSORT
TSO-E (VER. 2)	5685-025	2.3.0	IBM
VPS		5.0.117	LEVI, RAY, & SHOUPE
VSAM (DFP/XA)		3.3.0	IBM
VTAM (ACF) V3	5685-085	3.3.0	IBM



ITAC RECOMMENDATIONS

Access and Privacy

Issue #1: Aggressive Policy

ISSUE 1:
Should the state adopt an aggressive policy regarding the use of technology to provide access to services and current and retrospective information?

RECOMMENDATIONS:
The state should adopt an aggressive policy regarding the use of technology to provide access to services and current and retrospective information with appropriate regard for budgetary considerations.

Issue #2: Communication and Exchange of Information

ISSUE 2:
How actively should the state participate in and use manifestations of the electronic data superhighway?

RECOMMENDATIONS:
The state should actively participate in and use manifestations of the electronic data superhighway.

Issue #3: Mandates

ISSUE 3:
Should laws and policies governing access, privacy, and data sharing be changed or updated to meet needs of the information age?

RECOMMENDATIONS:
In order to provide the greatest access, while guarding individual privacy, the state should review and revise all statutes and policies that might be viewed as impediments to access to state IT resources.

Issue #4: Information Technology in Business and Service Delivery

ISSUE 4:
Should the state pursue use of IT as a means for service delivery, including:

- coordinated, integrated access from a variety of convenient locations
- use of electronic transactions (EDI, EFT, EBT)?

RECOMMENDATIONS:
The state should pursue the use of IT as a means for service delivery including:

- use of electronic transactions (EDI, EFT, EBT).
- coordinated, integrated access from a variety of convenient locations.

Issue #5: Code of Fair Information Practices

ISSUE 5:
Should the state adopt a policy regarding fair information practices?

RECOMMENDATIONS:
The state should adopt a policy regarding fair information practices, clearly stating information privacy policies and practices.

Issue #6: Transmission Privacy Guidelines

ISSUE 6:
Should the state adopt a policy defining state agency personnel responsibilities regarding communications privacy and the access and use of information that might be intercepted in the course of performing IT work?

RECOMMENDATIONS:
The state, through the Department of Administration and cooperating state agencies, should adopt a policy defining state agency personnel responsibilities regarding communications privacy and the access and use of information that might be intercepted in the course of performing IT services.

Issue #7: Access Charges

ISSUE 7:
Should the state charge for access?

RECOMMENDATIONS:
Develop policy guidelines to establish either free access or access with a service charge. Criteria would include whether the access provided is an inherent part of the general mission of the organization or whether the access is for the private benefit of the person requesting it, along with the degree to which the public and private good involved can be distinguished.

Issue #8: Use of Third Party Providers

ISSUE 8:
Should the state use third party information services for access to services? What are the privacy and revenue issues that need to be addressed in using third party providers (to provide access, service, outsourcing, etc.)

RECOMMENDATIONS:
Recognize the important traditional role of third party information and service providers and embrace appropriate, nonexclusive implementations of those relationships in the electronic information age.

Issue #9: Availability of Services on the Public Network

ISSUE 9:
Should state government take a proactive stand regarding the deployment of high capacity switched data transport capability on the public switched communications network in Montana?

RECOMMENDATIONS:
State government should take a proactive stand regarding the deployment of high capacity switched data transport capability on the public communications network in Montana.

Issue #10: Vision

ISSUE 10:
Should the state adopt a vision that would direct IT planning and development to consider future delivery and/or access for citizens in their homes, businesses, schools, libraries, and organizations?

RECOMMENDATIONS:
The state should adopt a vision that is flexible and responsive to citizen needs and demands--a vision that would guide information technology planning and development to take advantage of current and future service delivery and/or access technologies for citizens in their homes, businesses, schools, libraries, and organizations.

Coordination

Issue #1: Network Sharing

ISSUE 1:
Should the state continue with a shared network concept or allow multiple networks?

RECOMMENDATIONS:
ISD should continue with the current practice of sharing network facilities, with ISD regularly assessing the overall cost effectiveness of providing a shared network for the enterprise.

Issue #2: Network Private Sector Access

ISSUE 2:
What private sector access to the State's telecommunications networks should be provided?

RECOMMENDATIONS:
ISD should continue with the current practice of providing private sector access on a case-by-case basis, based on needs identified by agency program managers.

ITAC and ISD should develop a proposal for a design to be presented to the next legislative session to develop greater network capacity to handle increased private sector access.

Issue #3: Public Safety Radio Networks

ISSUE 3:
Should the state study the feasibility of consolidating public safety radio networks which are today managed separately by the Departments of Justice, Transportation, and State Lands?

RECOMMENDATIONS:
The Departments of Justice, Transportation, and State Lands should join with ISD to assess how these state and local systems should evolve to derive maximum benefit from the regulatory and technological changes now underway.

ITAC and ISD should develop a proposal for the design of a consolidated public safety radio network to be presented to the next legislative session.

The Departments of Justice, Transportation, State Lands, other affected agencies, and ISD should solicit the ideas and advice of local government organizations such as MACO and the League of Cities and Towns in order to determine if local agencies should be included in the design.

#4: Fostering Data Sharing by Coordinating Technology

ISSUE 4:
How does the state best coordinate technology purchases and designs to enhance data sharing in the enterprise and thereby eliminate potential technological inhibitors?

RECOMMENDATIONS:
ITAC should reaffirm previous ITMG and ITAC efforts, endorsing in concept the importance of coordinating technology, including the concept of data sharing as stated in the Data Sharing Resolution.

ISD should include the Data Sharing Resolution as part of the specifications used in future efforts to establish policies and procedures used to carry out ISD's responsibilities as specified by 2-17-501, MCA.

Issue #5: Enterprise Database Directions

ISSUE 5:
How should the state proceed with future acquisitions of database software? Should ITAC endorse the enterprise "database directions" recommendation made by ITMG?

RECOMMENDATIONS:
ITAC recommends that the State acquire a single database to be implemented as the enterprise solution in accordance with the following motions passed at the March 3, 1994 meeting:

- Acquire an Oracle site license for the database software and that ISD, as part of their rate review, consider how that cost be recovered.
- Acquire a site license for the programming tools and end-user access software from a vendor that is yet to be determined, the vendor to be determined by ISD.

Issue #6: Local Area Network (LAN) Operating System Directions

ISSUE 6:
Should the state take a coordinated approach to acquiring and providing LAN network operating system services (Novell NetWare 4.0)? Should ITAC endorse the enterprise direction for Novell's NetWare made by ITMG?

RECOMMENDATIONS:
ITAC recommends that the state acquire a single NetWare license to be implemented as the enterprise solution in accordance with the following motions passed at the March 3, 1994 meeting:

- Upgrade the existing NetWare 3.x standard to NetWare 4.x, implementing NetWare 4.x as the enterprise network.
- Enter into a master license agreement with Novell.

Issue #7: Personal Services

ISSUE 7:
How should the state acquire personal services used in support of its data processing needs?

RECOMMENDATIONS:
ITAC recommends that a task force be established to:

Clarify the respective responsibilities of the agencies and ISD, including a model definition of appropriate technical support to be obtained by all agencies and a better description of the services provided by ISD.

Make recommendations to the 1997 Legislature on the appropriate means of acquiring IT personal services. Issues that the task force would address include the following:

- Centralization vs. decentralization
- Nature of services acquired (staff size, composition, etc.)
- Agency vs. private sector vs. ISD staff
- Recruiting, training, compensation, and retention

Issue #8: Network Coordination

ISSUE 8:
To what extent should ISD manage the data network, especially those portions of the network that are located within state agencies?

RECOMMENDATIONS:
ISD should coordinate interagency networks (voice, data, video, radio) with active input from agencies, and ITAC when appropriate, on product needs and choices.

ISD should establish a process to resolve disputes regarding management of the network.

Issue #9: Governance: ITAC and the Department of Administration

ISSUE 9:
How should ITAC be organized to best represent the needs of the agencies and coordinate its activities with the Department of Administration?

RECOMMENDATIONS:
ITAC recommends the:

Continuation of the current practice of relying on ISD for primary support of ITAC activities,

Establishment of a process using ad hoc committees appointed by the Director of the Department of Administration to adjudicate disputes between agencies and/or ISD,

Establishment of issue-specific task forces comprised of ITAC members who would represent ITAC on specific issues, including rate setting, budgetary initiatives and, legislative advocacy,

Establishment of a steering committee comprised of ITAC members who would represent ITAC on strategic IT issues over the term of their membership,

Reaffirmation of the current practice of allowing only senior level agency management to serve on ITAC.

Issue #10: Governance: ITAC and ITMG

ISSUE 10:
What is the appropriate relationship between ITAC and ITMG?

RECOMMENDATIONS:
ITAC recommends that a task force be established to formally document the relationship that should exist between ITAC and ITMG and present the proposed policy to ITAC for review and approval. This task force should have the goals of clarifying the relative roles of ITAC and ITMG and ensuring that good communication continues between the two organizations.

Funding

Issue #1: Proprietary Fund

ISSUE 1:
Should the proprietary fund continue to be used as a primary funding source for IT?

RECOMMENDATIONS:
Continue to use the proprietary fund as a primary funding source for IT investment and support with rates developed to provide full asset replacement.

Issue #2: Data Network Funding (from Coordination Task Force)

ISSUE 2:
Should ISD continue to recover network costs through average cost assessments?

RECOMMENDATIONS:
ITAC recommends that ISD continue with the current methods for recovering the costs of voice and video network costs.

ITAC recommends that ISD adopt a two-tier "telephone system" model for the FY 96-97 biennium with Local Area Network (LAN) costs recovered via an averaged access charge and Wide Area Network (WAN) (out of town or community) costs recovered by a charge back which is based on some usage, capacity, time, and/or distance basis. ISD, ITMG, and ITAC will work together to develop recommendations and a capability to attain this model. In the interim, average cost assessments should be used to recover WAN costs.

ITAC recommends that the cost of access and use by Universities and other entities is recovered through a fee structure designed for those entities.

Issue #3: Coordination

ISSUE 3:
How might state agencies coordinate, prioritize, and share IT to better use available funding?

RECOMMENDATIONS:
Pursue a coordinated statewide (centralized) infrastructure for IT development and consistency using pooled resources with ITAC continuing to prioritize, submit, and support statewide IT projects.

ITAC should participate more actively in standards for statewide use and give consideration to funding within the proprietary rate structure for site licenses or master license agreements to purchase standard software products.

Issue #4: Funding Increase

ISSUE 4:
How should the State of Montana fund increases in capital investment for IT?

RECOMMENDATIONS:
IT capital investments (above current level replacement assets) with high acquisition cost and long-term life expectancy should be initially financed using debt financing or lease purchase agreements. Repayment should be through adjusted rates paid to the proprietary fund.

Issue #5: Equal Access

ISSUE 5:
Can a funding mechanism be developed to allow equal access and availability to every state agency, without regard to size or funding source?

RECOMMENDATIONS:
Funding mechanisms should be developed to allow equal access and availability of IT to every state employee whose job responsibilities require or would benefit from IT resources, without regard to employing agency size or funding source.

SHORT-TERM:
Change the existing surplus property mandates to facilitate interagency exchange of IT resources, particularly older personal computers.

Develop a central facility with IT resources that could be shared among agencies which individually cannot afford or justify the capital expenditure. Recover the costs of these resources via the proprietary fund mechanism.

LONG-TERM:
Develop a plan that would allow every agency to achieve a "minimum level" technology by the year 2000. The plan would define a "minimum level" technology for each state government employee whose job responsibilities require or would benefit from IT resources and the cost and proposed funding necessary to achieve the level of IT defined.

Issue #6: Information and Education

ISSUE 6:
How do we inform and educate the OBPP, the Legislature, and IT consumers (agencies) about the value of IT and the recommendations in this report and the importance of providing the funding necessary for IT support and development?

RECOMMENDATIONS:
Use all appropriate resources to inform and educate the OBPP, the Legislature and IT consumers (agencies) about the value of IT and the importance of providing the funding necessary for IT support and development.

Issue #7: Budget and Legislative Process

ISSUE 7:
Should IT be recognized as critical to the mission of state government in the budget and legislative process?

RECOMMENDATIONS:
The criticality of IT to the mission of state government should be emphasized by ITAC resolution regarding the following legislative and budget processes:

Recommend formation of a legislative subcommittee responsible for the review of all IT proposals.

ITAC/ITMG development of a state IT infrastructure plan.

ITAC/ITMG review of significant agency requests for IT for consistency with state plan and direction.

ITAC/ITMG development of presentation/analysis standards.

Recommend a one-time system modernization project.

Document successes of previous investments.

Training

ISSUE 1:
How should the state fund IT training?

Issue #1: Training Funding

RECOMMENDATIONS:
Agency management should recognize and identify the costs of training in any IT acquisition. Including a training cost component or "bundling" training costs in IT acquisitions should be considered as an option by agency management.

Issue #2: State Employee it Competency

ISSUE 2:
Should state agencies adopt IT competency objectives to be achieved over the next five years?

RECOMMENDATIONS:
The following should be considered a consolidated recommendation for adopting IT competency objectives: agency standardization of elementary computing skill requirements; new staff testing for basic computing skills; IT plans should include long term training requirements; and training for existing employees should be tied to performance appraisals.

Issue #3: Content & Delivery

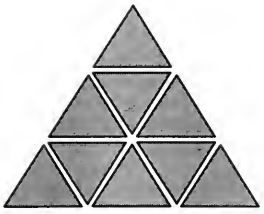
ISSUE 3:
Should a greater variety of curriculum and delivery methods be provided?

RECOMMENDATIONS:
As a state we need to provide a greater variety of curriculum and delivery methods by making available to the agencies more computer-based training on the state's network, taking advantage of METnET to deliver training, relying on contractors for specialized application specific training, and making available a state training facility that agencies can use to provide training when needed.

Issue #4: Agency Support

ISSUE 4:
If agency support needs are not being met, how can adequate internal technical support be provided for all agencies?

RECOMMENDATIONS:
If agency support needs are not being met, adequate internal support could be best provided by assessing internal IT organizations and determining if the current level of support being provided is adequate, establishing a priority of support beginning with 1) internal agency resources, 2) ISD, or 3) other agency or pool of resources from which staff with specific application experience and expertise could be drawn from, and promoting common application, database, and development products to leverage the skill set of IT professionals.



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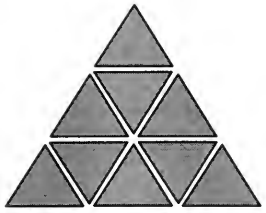


ISD POLICIES, PROCEDURES, STANDARDS & RECOMMENDATIONS

During the past several years, several white papers and working draft documents have been published to identify directions, policies, procedures, standards and recommendations for the acquisition and management of information technology resources.

Enterprise Information System

In 1994, a draft document was developed detailing the implementation of the enterprise information system (Novell 4.x implementation). The "Enterprise Information System for State of Montana" document has been adopted as draft guidelines and standards for comment by ITMG.

Database Directions

In 1993, the Database Directions document defining standards and guidelines for the selection of database software was adopted. The following summarizes the key proposed standards and recommendations:

- Open standards.
- Relational architecture.
- SQL-89 conformance.
- Integrity services controlled by the RDBMS.
- Record locking, application rollback, application resource release and deadlock detection.
- Full distributed transaction support for distributed systems.
- Functionally rich set of utilities for support and development.
- Support for a variety of programming languages, both 3GL and 4GL.
- Open system approach to OLTP.
- Support of numerous vendor software offerings for client/server and GUI applications with Remote Data Management (RDM).
- Data dictionary or catalog structures maintained through SQL commands.

- Standard security via user identification and password validation with cooperation with external security systems in place on that platform.
- Data integrity through recovery with rollback, journaling and recovery facilities.
- Backup facilities allowing for continuous operations.
- Robust end user capabilities.
- ANSI and ISO standards conformance.
- Access to non-relational data.
- Portability or communication with multiple platforms.
- Support of state network protocols.
- Use of existing development skill set.
- Languages and tools that work on multiple hardware/operating system environments.

Imaging

In 1992 a draft document of imaging standards and recommendations was issued and identifies management and technical issues. Imaging system technologies are relatively new with few industry wide standards established. The potential savings associated with implementing imaging technology are tremendous. Imaging system acquisition and management shall follow the standards and recommendations summarized below:

- Optical imaging may be used for the daily management of all records and replacement of short and medium term records. Long term records must comply with records management policy.
- WORM technology must be utilized for records of legal or long-term value with duplicate disks stored in separate locations. Recycled optical media must not be used for legal, long-term, or required records. When re-writable technology is used, read/write privileges must be carefully controlled and auditable.
- Optical disks used for legal or long-term storage must be inspected at least annually.
- Each agency shall adopt a written policy regarding management and administration of its imaging system.

- All public records to be put on an imaging system must have retention schedules approved by the State Records Committee.

- Public access to records must be considered, ensuring appropriate security and privacy.

- Each agency shall maintain system documentation, including operating procedures documentation.

- Imaging systems must have security which restricts access and prevents retrieval of images or index information by unauthorized personnel.

- Index entry verification must be performed. Systems must provide C2 level security against update of the index or stored images. Image indexing must be done using an American National Standards Institute (ANSI) Standard Query Language (SQL) Data Base Management System (DBMS). The index must be accessible and manipulatable through user written standard application development languages. The index data for the contents for a specific disk must be written at multiple locations on the disk.

- New systems must bridge to other non-proprietary imaging systems. Migration of existing image data to new systems must be carefully planned.

- Use 5.25 inch optical disks.

- Systems must support use of intermediate storage devices and provide backup/recovery/restart capabilities.

- Systems must support the CCITT Group 3 and/or Group 4 standards with no proprietary alterations to the algorithm.

- Decompression hardware and software must be 100% compatible.

- Scanning density should be at least 200 dots per inch (dpi) for office documents. Density of 300 to 600 dpi may be necessary for engineering drawings, maps, and documents with background detail. Validate the selected scanning density with tests on actual documents.

- Systems must support the state/university system Graphical User Interface (GUI) environments.

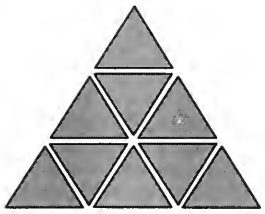
- Systems must use state/university system supported networking protocols and have a minimum bandwidth of 10 mbps for LANs and 1.544 mbps for WANs.

- Systems must in the state/university system Local Area Network (LAN) topologies.
- Systems must be able to distribute images in CCITT Group 3 or Group 4 FAX (recognizing Group 3 destination) or bit mapped formats.
- Systems must use non-proprietary file header formats to label digital images. Tagged Image File Format (TIFF) is a de facto standard for file header information. Require a detailed definition of the image file header label structure.

Personal Computer Directions

In 1991, the Personnel Computer Directions document was drafted to record the basis of several decisions regarding personal computer hardware and software. The following summarizes these decisions:

- IBM PC/Intel is the standard personal computer platform.
- New microcomputer acquisitions must be made using the state microcomputer term contracts.
- Novell NetWare is the standard Local Area Network operating system.
- The state will have an enterprise electronic mail system serving all mainframe terminals, intelligent workstations, and departmental minicomputers. ZIP!Mail is the standard for Local Area Network electronic mail.
- WordPerfect is the standard word processing software.
- Lotus 1-2-3 is the standard spreadsheet software.
- DOS is the standard personal computer operating system.
- Windows is the standard graphical user interface software.



DATA SHARING RESOLUTION

The following resolution was adopted by the Data Processing Advisory Council at the November 5, 1992 meeting:

DATA PROCESSING MANAGERS' GROUP RESOLUTION:
DATA SHARING
AUGUST 12, 1992

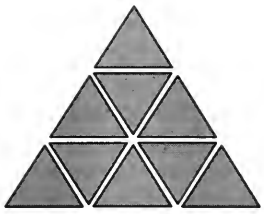
WHEREAS, a tremendous amount of electronic data is being maintained by state agencies, and;

WHEREAS, the duplication of electronic data will continue to increase if systems are developed without consideration for the sharing of data with other agencies, and;

WHEREAS, the cost of capturing, processing, and analyzing electronic data can be minimized for the state as a whole if more data sharing takes place between agencies;

NOW, THEREFORE BE IT RESOLVED by the Data Processing Managers' Group that it is a goal of state agencies to share data with other agencies whenever possible, if not prohibited by legal confidentiality requirements. Therefore, during major system development and enhancement projects, all state agencies should consider other agencies' automated systems in their design plans as an alternative to creating redundant data and/or systems within their own agency;

AND, BE IT FURTHER RESOLVED by the Data Processing Managers' Group that agencies should develop systems using software that meets compatibility criteria developed, with agency involvement, by ISD. The criteria should be developed with the purpose of ensuring that agencies acquire and use hardware and software that enable data to be shared among agencies.



ACRONYMS

ACH	Automated Clearing House
ACIS	Adult Correctional Information System
ADSO	Application Development System Online
AFDC	Aid to Families with Dependent Children
AFIS	Automated Fingerprint Identification System
APATS	Automated Payroll and Time-keeping System
ARM	Administrative Rules of Montana
ARM	Administrative Rules of Montana
ATM	Asynchronous Transfer Mode
BAS	Budget Allocation System
BBS	Bulletin Board System
BCD	Biological and Conservation Data System
BeAR	Benefits Automated Rewrite
BEVS	Business Equipment Valuation System
BIS	Benefits Information System
BPR	Business Process Re-engineering
BPR	Business Process Re-engineering
CADD	Computer Aided Design and Development
CAMAS	Computer Assisted Mass Appraisal System
CAPS	Child and Adult Protective Services
CCB	Capitol Complex Backbone
CD ROM	Compact Disk Read Only Memory
CDC	Centers for Disease Control
CJIN	Criminal Justice Information Network
CMS	Collection Management System
CPD	Computing, Policy, and Development
CPD	Computing, Policy and Development Section
CRAR	Cash Receipts/Accounts Receivable
CRT	Cathode Ray Tube (terminal)
CSENet	Child Support Enforcement Network
CTPS	Contract Tracking and Payments System
CUI	Character User Interface
CY	Calendar Year
DASD	Direct Access Storage Devices
DBMS	Database Management Systems
DOS	Disk Operating System
DPAC	Data Processing Advisory Council
DPMG	Data Processing Managers Group
DTP	Desktop Publishing
E-Mail	Electronic Mail

EBT ..... Electronic Benefits Transfer
EDI ..... Electronic Data Interchange
EFT ..... Electronic Funds Transfer
ELF ..... Electronic Filing
ETR ..... Electronic Tax Reporting
FAIM ..... Families Achieving Independence in Montana
FCC ..... Federal Communications Commission
FM ..... Facilities Management
FTE ..... Full-Time Equivalent
FTP ..... File Transfer Protocol
FY ..... Fiscal Year
GIS ..... Geographic Information System
GPS ..... Global Positioning System
GUI ..... Graphical User Interface
ICC ..... Information Control Core
IDMS ..... Integrated Data Management System
IIT ..... Individual Income Tax
ISD ..... Information Services Division
ISDN ..... Integrated Services Digital Network
IT ..... Information Technology
ITAC ..... Information Technology Advisory Council
ITMG ..... Information Technology Managers Group
IVR ..... Interactive Voice Response
JOBS ..... Job Opportunities and Basic Skills
LAN ..... Local Area Network
LIEAP ..... Low Income Economic Assistance Program
MACCS ..... Montana Child Care System
MAE-FAIRS Montana Automated Education Financial and Information Reporting System
MB ..... Megabyte
MCA ..... Montana Codes Annotated
METNET ..... Montana Educational Telecommunications Network
MII ..... Montana Information Infrastructure
MIPS ..... Millions of Instructions per Second
MLA ..... Master License Agreement
MMIS ..... Medicaid Management Information System
MOD ..... Master Ownership Database
MOM ..... Montana Operations Manual
MOM ..... Montana Operations Manual
MOM ..... Montana Operations Manual
MSU ..... Montana State University
MTAC ..... Montana Telecommunications Advisory Council
NCIC ..... National Crime Information Center
NIST ..... National Institute of Standards and Technology
NTIA ..... National Telecommunications and Information Administration
OCR ..... Optical Character Recognition
OEE ..... Online Edit and Entry
OMB ..... Office of Management and Budget

OPI ..... Office of Public Instruction
OPI ..... Office of Public Instruction
PAMS ..... Property Accountability Management System
PBX ..... Private Branch Exchange
PC ..... Personal Computer
PDA ..... Personal Digital Assistants
POS ..... Point of Sale
PPP ..... Payroll/Personnel/Position Control
RDA ..... Remote Dial-in Access
RDBMS ..... Relational Database Management System
REACH ..... Realizing Education and Community Health
RFQ ..... Request for Quotation
RJE ..... Remote Job Entry
SBAS ..... Statewide Budgeting and Accounting System
SDLC ..... Synchronous Data Link Control
SEARCHS .... System for the Enforcement and Recovery of Child Support
SLIP ..... Single Line Internet Protocol
SNA ..... Systems Network Architecture (IBM)
STN ..... State Telecommunications Network
SummitNet ..... State and Universities of Montana Multiprotocol Network
TCP/IP ..... Transmission Control Protocol/Internet Protocol
TEAMS ..... The Economic Assistance Management System
UPS ..... Uninterruptable Power Supply
VICs ..... Visitor Information Center systems
WAIS ..... Wide Area Information Service
WAN ..... Wide Area Network
WARP ..... Wage Automated Reporting Program
WCAP ..... Workers Compensation Automated Project
WH/OFLT ..... Withholding/Old Fund Liability Taxes
WIC ..... Women, Infants and Children
WLN ..... Western Library Network
WWW ..... World Wide Web

Appendix G: Acronyms

EVALUATION FORM

1996-97 Information Technology Plan

Help us make the biennial Information Technology Plan better! Please answer the following questions; tear out the form at the perforation; fold and mail. Your responses will be carefully considered for future documents.

Name: _____

Address: _____

Phone #: _____

We would also like your feedback on specific chapters of the plan. It is not necessary to comment on all the sections.

	Most Helpful	Helpful	Neutral	Somewhat Helpful	Least Helpful
Executive Summary	❑	❑	❑	❑	❑
Prologue	❑	❑	❑	❑	❑
Level 1: Enterprise Information Technology Foundation					
Enterprise Organization	❑	❑	❑	❑	❑
Enterprise Environment	❑	❑	❑	❑	❑
Enterprise Vision	❑	❑	❑	❑	❑
ITAC's Strategic Vision	❑	❑	❑	❑	❑
Technology Serving Montana Citizens	❑	❑	❑	❑	❑
Level 2: The Enterprise Utilizing Information Technology					
ISD Plans & Accomplishments	❑	❑	❑	❑	❑
Agency/University Plans & Accomplishments	❑	❑	❑	❑	❑
Enterprise Statistics	❑	❑	❑	❑	❑
Level 3: Enterprise Preparation for the 21st Century					
Enterprise Plans (Consolidated)	❑	❑	❑	❑	❑
ITAC & ITMG Subcommittees	❑	❑	❑	❑	❑
ISD & Agency Exploration of Future Technology	❑	❑	❑	❑	❑
Appendices					
A: Statutes	❑	❑	❑	❑	❑
B: Computing Environment and Network	❑	❑	❑	❑	❑
C: ITAC Recommendations	❑	❑	❑	❑	❑
D: Advisory Groups	❑	❑	❑	❑	❑
E: ISD Policies, Procedures, Standards, & Recommendations	❑	❑	❑	❑	❑
F: Data Sharing Resolution	❑	❑	❑	❑	❑
G: Acronyms	❑	❑	❑	❑	❑

Overall, how did you find the content of the *1996-97 Information Technology Plan*?

❑Most Helpful ❑Helpful ❑Neutral ❑Somewhat Helpful ❑Least Helpful

Comments:

_____

_____

_____

What would you like to see done differently in the future?

_____

_____

_____

	Yes	No
May we contact you to discuss your ideas?	❑	❑

If so, please include your name, address, and phone number on the reverse side.

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Information Services Division
Department of Administration
Mitchell Building, Room 222
P.O. Box 200113
Helena, MT 59620-0113

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